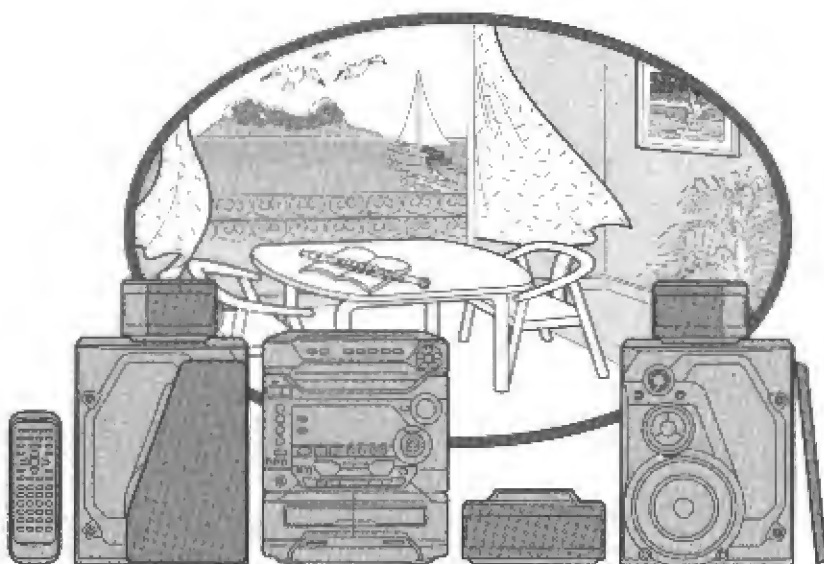


DVD Stereo System

SC-DK1

Operating Instructions



The illustration shows the model for the U.S.A. and Canada.

Panasonic®

Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

PP GCS GK

DVD **COMPACT**
VIDEO **disc**
DIGITAL VIDEO

RQT5067-2P

Dear customer

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following system.

System		SC-DK1
Main unit		SA-DK1
Speakers	Front	SB-AK57 (For U.S.A., Canada and Asia)
		SB-DK1 (For China)
	Surround	SB-PS70
	Center	SB-PC70

CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

For U.S.A. and Canada

CAUTION:

TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

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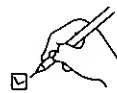
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Supplied accessories



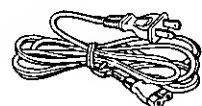
Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts.

(Only for U.S.A.)

To order accessories contact 1-800-332-5368 or web site (<http://www.panasonic.com>).

The style of AC power cord and FM indoor antenna differ with the area.

- ☐ AC power supply cord 1 pc.
For U.S.A. and Canada: RJA0065-A
For China: RJA0055-K
For others: RJA0019-2K



- ☐ FM indoor antenna 1 pc.
For U.S.A., Canada and Asia: RSA0006-J
For China: RSA0007



- ☐ AM loop antenna set 1 set
(RSA0022)



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Only for Asia and China

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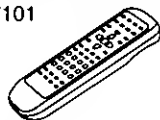
Reference

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Maintenance	back cover
Product service	back cover

- ☐ Video cable 1 pc.
(RJL1P016B15A)



- ☐ Remote control transmitter 1 pc.
For U.S.A. and Canada: EUR647100
For others: EUR647101



- ☐ Remote control batteries (R6, AA, UM-3) 2 pcs.



- ☐ Plug adaptor 1 pc.
(Except for U.S.A., Canada and China: SJP5213-2)



THE FOLLOWING APPLIES ONLY IN THE U.S.A.:

CAUTION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The radio receiver is not subject to above item (2).

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPLIANCE TO RAIN, SPLASHING, DRIPPING OR MOISTURE.



CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Before use

Precautions

Before using this unit please read these operating instructions carefully. Take special care to follow the warnings indicated on the unit itself as well as the safety suggestions listed below. Afterwards keep them handy for future reference.

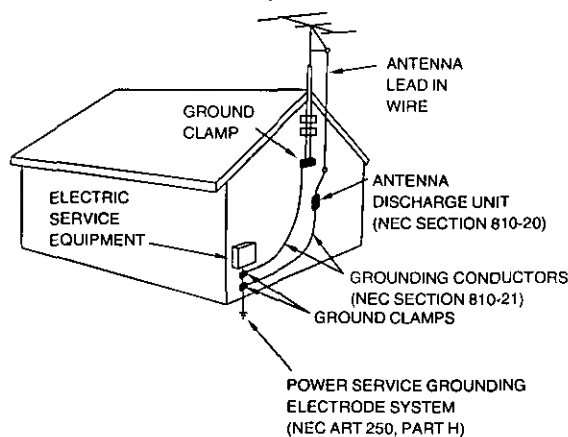
Safety

1. **Power Source**—The unit should be connected to power supply only of the type described in the operating instructions or as marked on the unit.
2. **Polarization**—If the unit is equipped with a polarized AC power plug (a plug having one blade wider than the other), that plug will fit into the AC outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
3. **Power Cord Protection**—AC power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Never take hold of the plug or cord if your hand is wet, and always grasp the plug body when connecting or disconnecting it.
4. **Nonuse Periods**—When the unit is not used, turn the power off. When left unused for a long period of time, the unit should be unplugged from the household AC outlet.

Installation

Environment

1. **Outdoor Antenna Grounding**—If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1990, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See figure below.



NEC—NATIONAL ELECTRICAL CODE

2. **Water and Moisture**—Do not use this unit near water—for example, near a bathtub, washbowl, swimming pool, or the like. Damp basements should also be avoided.

3. **Heat**—The unit should be situated away from heat sources such as radiators and the like. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
4. **Condensation**—Moisture may form on the lens in the following conditions...
 - immediately after a heater has been turned on.
 - in a steamy or very humid room.
 - when the unit is suddenly moved from a cold environment to a warm one.If moisture forms inside this unit, it may not operate properly. To correct this problem, turn on the power and wait about one hour for the moisture to evaporate.

Placement

1. **Ventilation**—The unit should be situated so that its location or position does not interfere with its proper ventilation. Allow 10 cm (4") clearance from the rear of the unit.
2. **Foreign Material**—Care should be taken so that objects do not fall into and liquids are not spilled into the unit. Do not subject this unit to excessive smoke, dust, mechanical vibration, or shock.
3. **Magnetism**—The unit should be situated away from equipment or devices that generate strong magnetic fields.
4. **Stacking**—Do not place heavy objects, other than system components, on top of the unit.
5. **Surface**—Place the unit on a flat, level surface.
6. **Carts and Stands**—The unit should be used only with a cart or stand that is recommended by the manufacturer. The unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart combination to overturn.
7. **Wall or Ceiling Mounting**—The unit should not be mounted to a wall or ceiling, unless specified in this operating instructions.



Maintenance

(= backcover for details.)

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

Service

1. **Damage Requiring Service**—The unit should be serviced by qualified service personnel when:
 - (a) The AC power supply cord or the plug has been damaged; or
 - (b) Objects have fallen or liquid has been spilled into the unit; or
 - (c) The unit has been exposed to rain; or
 - (d) The unit does not appear to operate normally or exhibits a marked change in performance; or
 - (e) The unit has been dropped, or the enclosure damaged.
2. **Servicing**—The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to an authorized service personnel.

For the address of an authorized servicenter:
In the U.S.A. 1-800-211-7262 or web site
(<http://www.panasonic.com>)
In Canada 905-624-5505 or web site
(www.panasonic.ca)

Concerning the remote control

Listening caution



Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend you to avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.

Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOK-CASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE IN ORDER TO KEEP WELL VENTILATED CONDITION. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION CONDITION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

DANGER	LASER RADIATION WHEN OPEN AVOID DIRECT EXPOSURE TO BEAM
DANGER	RADIATION LASER LORSQUE OUVERT. EVITER TOUTE EXPOSITION AU FAISCEAU.
ADVARSEL	LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSÅBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSETELSE FOR STRÅLING
VARO!	AVATTIENNA JA SUOJALUKITUS OHJEITTAESSA OLET ALITUINA LASERSÄTEILYLLE. ÄLÄ KATSO SATEESEEN
VARNING	LASERSTRÅLING NÄR ÖPPNAN DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN
ADVARSEL	LASERSTRÅLING NÄR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN
VORSICHT	LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN

(Inside of product)

(Intérieur de l'appareil)

(Indersiden af apparatet)

(Tuotteen sisällä)

(Apparatens insida)

(Produktets innsida)

(Im Inneren des Gerätes)

Except for U.S.A. and Canada

CLASS 1
LASER PRODUCT

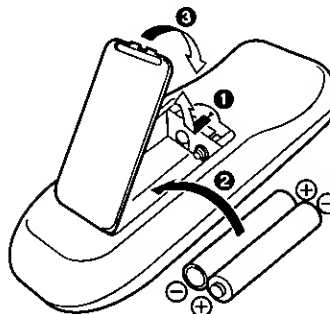
(Back of product)

Only for Asia

CAUTION:

The AC voltage is different according to the area.
Be sure to set the proper voltage in your area before use.
(For details, please refer to page 9.)

Battery installation



R6, AA size, UM-3

Use of batteries

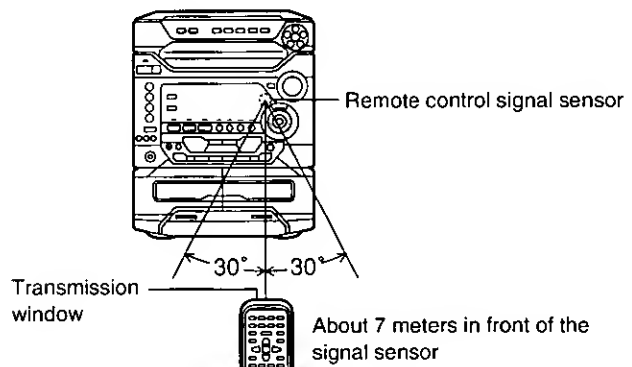
- Align the poles (+ and -) properly when inserting the batteries.
- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

If electrolyte leaks from the batteries, consult your dealer.

Wash thoroughly with water if electrolyte comes in contact with any part of your body.

Correct method of use



Transmission window

About 7 meters in front of the signal sensor

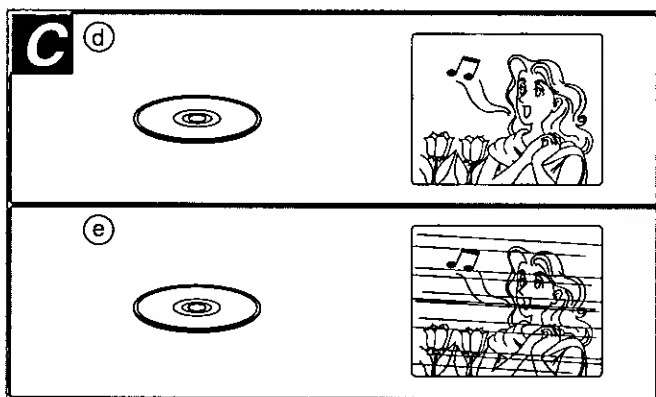
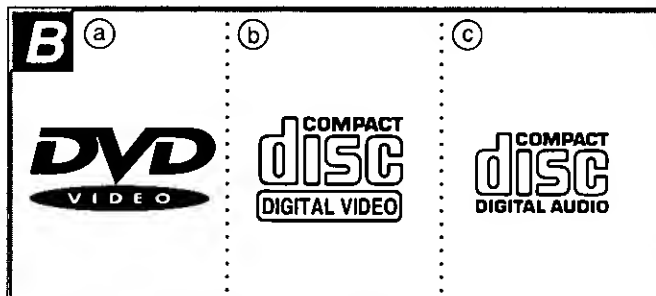
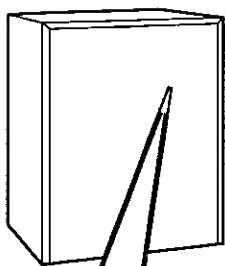
Operation notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of an inverter fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.

To prevent damage

- Never place heavy items on top of the unit.
- Do not disassemble or reconstruct the unit.
- Do not spill water or other liquids into the unit.

Before use



Region management information

A

DVD stereo system is manufactured to respond to Region management information that is described on a DVD disc.

If the number on the DVD disc does not correspond to the system, disc play cannot be done.

The Region numbers for this system

For U.S.A. and Canada: 1

For Asia: 3

For China: 6

Confirm the Region number at the back of your system.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Types of discs

This system can play back discs bearing any of the marks:

- (a) DVD
- (b) V-CD (Video CD)
- (c) CD

Note

• This system can not play the following discs

DVDs with a region number from outside the country of purchase and not marked "ALL". DVD-ROM/DVD-R/DVD-RAM/CD-ROM/CDV/CD-G/Photo CD/CD-R.

• This system cannot play DTS discs

This system doesn't have DTS decoder, so you cannot enjoy the disc encoded with DTS.

Type of disc for the type of connected TV

DVDs and Video CDs are recorded using either PAL or NTSC. Refer this table when selecting discs.

TV type	Disc	TV Monitor	
		For U.S.A. and Canada	For others
Multi-system TV	PAL	(e) ×	(d) ○
	NTSC	(d) ○	(d) ○
NTSC TV	PAL	(e) ×	(e) ×
	NTSC	(d) ○	(d) ○
PAL TV	PAL	(e) ×	(d) ○*
	NTSC	(e) ×	(e) ×

Note

The bottom part of the picture may be cut off if the Video CD played does not comply with standards.

*You cannot do any operation (e.g., the initial settings) by interacting with the TV screen.

Placement of speakers

Placement of front speakers

Place the speakers so that the superwoofer is on the outside. **A**

Note

- Keep your speakers at least 10 mm ($1\frac{1}{32}$ ") away from the system for proper ventilation.
- To avoid damage to the speakers, do not touch the speaker cones if you have taken the nets off.

Placement of center/surround speakers **B**

Center speaker

Place the center speaker above your TV, as close to it as possible.

Note

Do not place the center speaker on this unit as sound quality will be affected.

Surround speakers

We recommend that surround speakers be placed on the side of, or slightly behind, the listener at ear level.

Place the speakers with the Panasonic logo facing toward the listening position.

However, the position should be adjusted to your personal preference, because the effect varies to some degree depending upon the type of music and the music source.

For your reference

Even if you are forced to put your surround speakers on top of your front speakers, this system still allows you to enjoy surround effects (→ pages 41, 45, "Virtual rear surround effect").

Attaching to a wall **C**

Set speaker onto screws and slide through bracket to lock into position.

Note

The wall or pillar on which the speaker systems are to be attached should be capable of supporting a weight of 5 kg.

Caution

- Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.
- Do not attempt to attach these speakers to walls using methods other than those described in this manual.

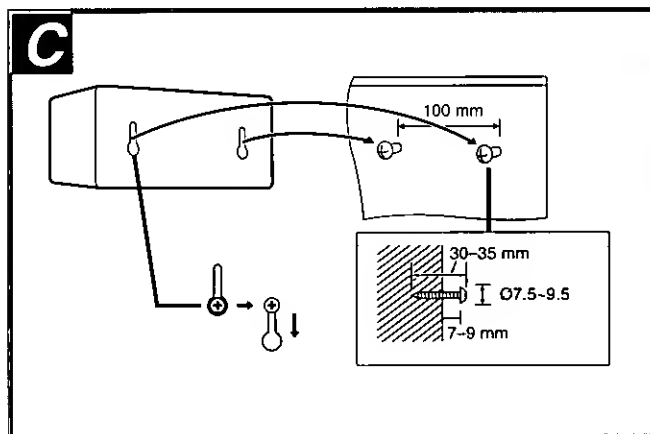
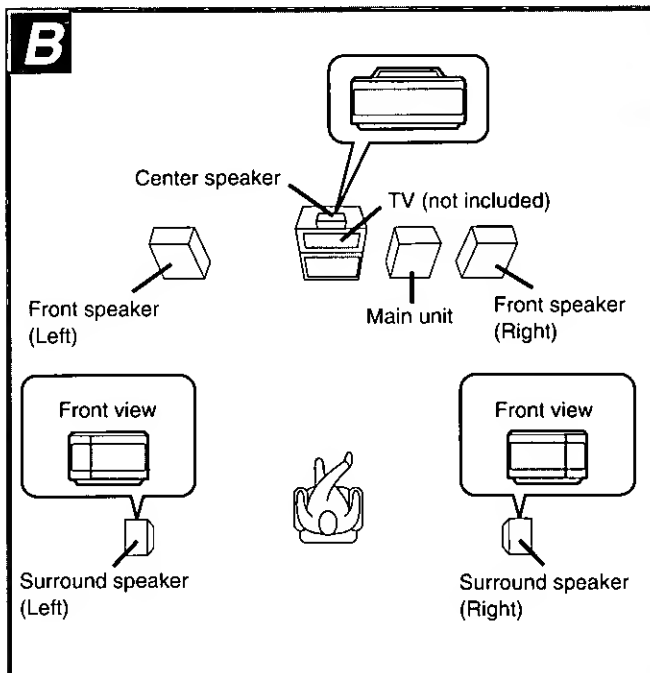
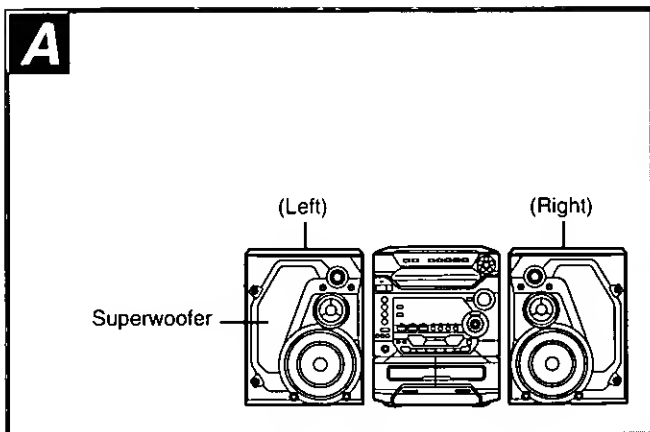


If irregular coloring occurs on your TV

These speakers are designed to be used close to a TV, but the picture may be affected with some TVs and set-up combinations.

If this occurs, turn the TV off for about 30 minutes.

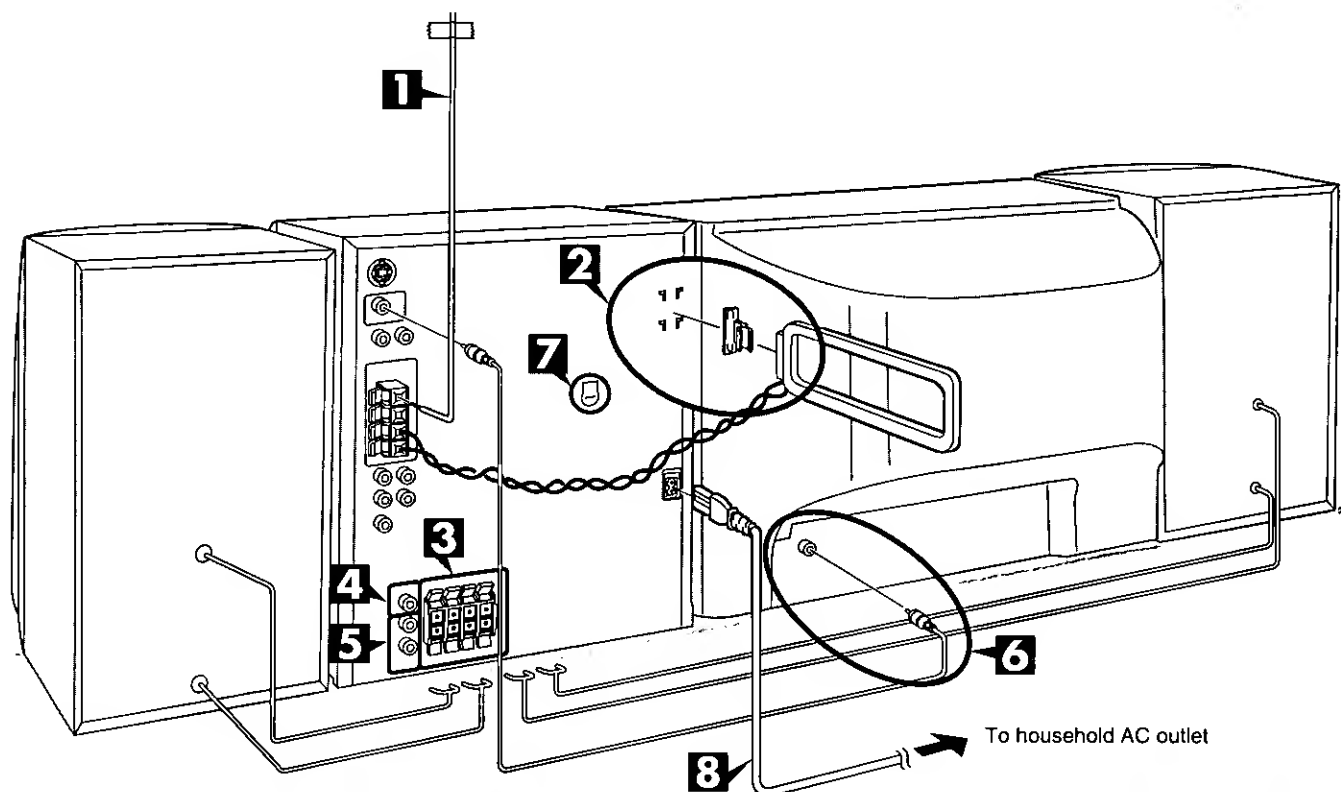
The TV's demagnetizing function should correct the problem. If it persists, move the speakers further away from the TV.



Connections

Connect the AC power supply cord after you have connected all other cables.

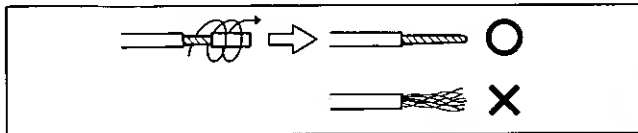
Before use



<p>1</p> <p>Adhesive tape</p> <p>FM indoor antenna</p> <p>②</p> <p>FM ANT 75Ω</p> <p>①</p> <p>FM ANT 75Ω</p> <p>Only for China</p>	<p>4</p> <p>CENTER (8Ω)</p>	<p>7</p> <p>Only for Asia</p> <p>230V 240V</p> <p>VOLT ADJ</p>
<p>2</p> <p>①</p> <p>Antenna holder</p> <p>②</p> <p>AM loop antenna</p> <p>AM ANT LOOP EXT</p> <p>Only for China</p>	<p>5</p> <p>(Left) (Right)</p> <p>L (Left) R (Right) SURROUND (8Ω)</p>	<p>8</p> <p>Appliance inlet</p> <p>Connector</p> <p>Approx. 6 mm</p>
<p>3</p> <p>HIGH LOW</p> <p>Gray (+)</p> <p>Red (+)</p> <p>Black (-)</p> <p>Blue (-)</p> <p>HIGH SPEAKERS LOW</p>	<p>6</p> <p>VIDEO OUT</p> <p>To your TV</p>	<p>A</p> <p>Only for Asia</p>

Basic connections (for supplied accessories)

- Plug the AC power supply cord into a household AC outlet only after all other connections have been made.
- To prepare the antenna wires and speaker cords, twist the vinyl cover tip and pull off.



1 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

Note

For best reception:

An FM outdoor antenna is recommended.

2 Connect the AM loop antenna.

After attaching the antenna, turn on the system and tune in a broadcast station. Then, turn the antenna to the angle of best reception and least interference.

3 Connect the front speakers.

Connect each end of the speaker cables to the terminal levers of the same color.

Use only the supplied front speakers.

The combination of the main unit and front speakers provide the best sound. Using other front speakers can damage the unit and sound quality will be negatively affected.

Caution

To prevent damage to circuitry, never short-circuit positive (+) and negative (-) speaker wires.

4 Connect the center speaker.

5 Connect the surround speakers.

6 Connect a TV (not included).

Connect a video connection cord from this system to your TV.

7 Only for Asia

Set the voltage.

Use a flat-head screwdriver to turn the voltage selector of the rear panel to the appropriate position for the area in which this system is used.

Set the voltage selector to "220 V" or "230–240 V".

8 Connect the AC power cord.

Only for Asia

If the power plug does not fit your socket, use the power plug adaptor (included).

Insertion of connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.

However there is no problem using the unit.

For your reference

Information you enter into the unit's memory, except for the time, remains intact for up to two weeks after the AC power supply cord is disconnected.

Optional antenna connections

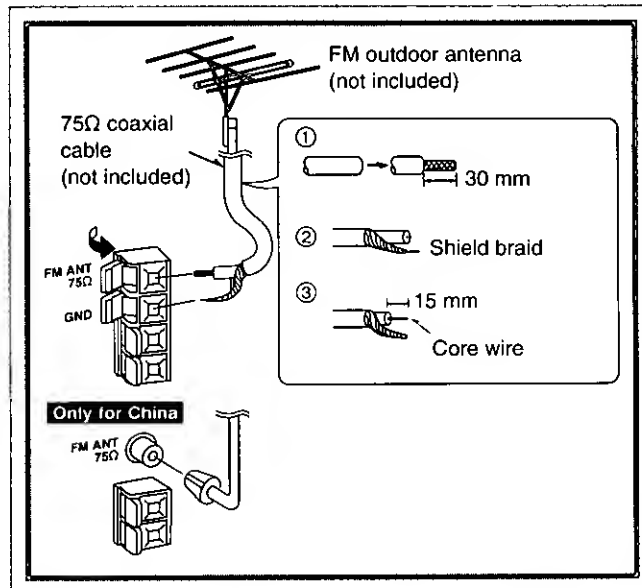
You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

Note

An outdoor antenna should be installed by a qualified technician only.

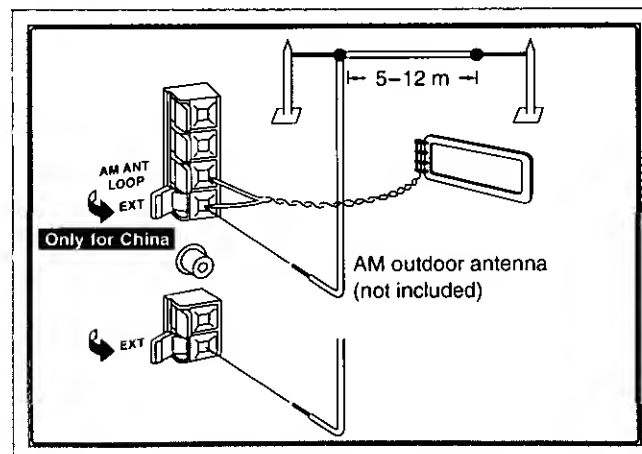


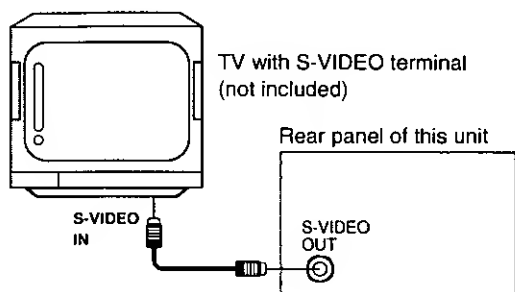
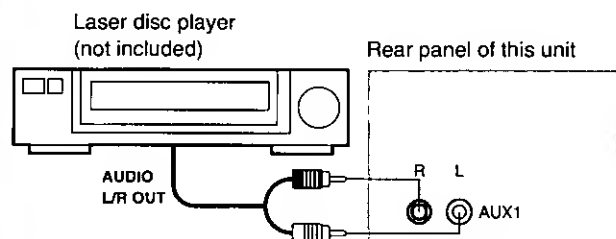
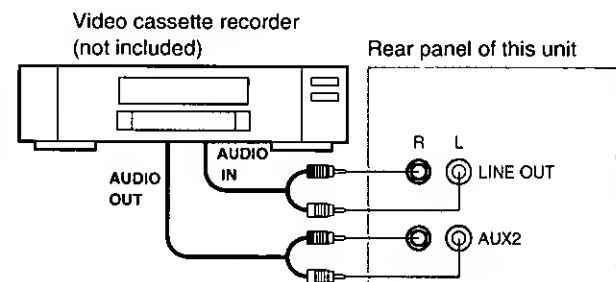
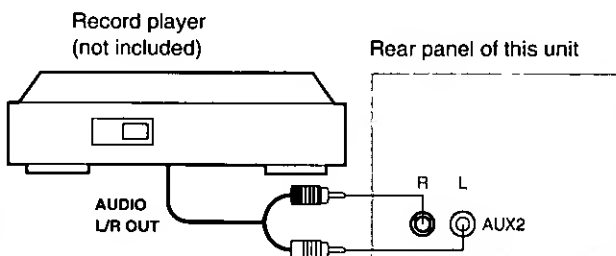
AM outdoor antenna

Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

Note

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

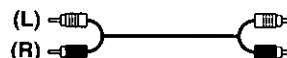


A**B****C****D**

Connections

External unit connection

- For details, refer to the manual of the units which are to be connected.
- When units other than those described below are to be connected, please consult with your dealer.



Television set (with S-VIDEO terminal)

Laser disc player

Video cassette recorder

You can playback the sound from a video cassette recorder through this unit's speakers or record sound from this unit onto a video cassette.

Record player

Sound cannot be produced unless a phono equalizer (not included) is connected.

A record player with a built-in phono equalizer is recommended.

To improve the sound effect

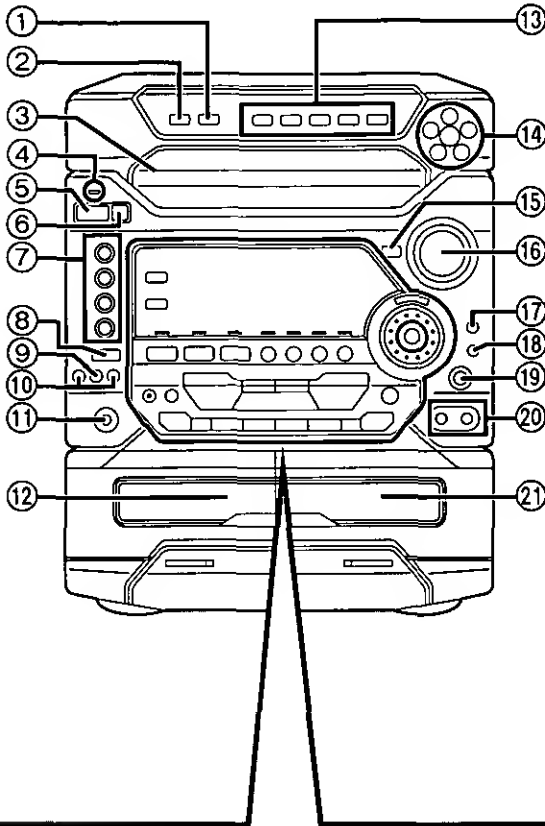
The front speakers have built-in subwoofers, but it is possible to connect another subwoofer (not included) to the SUBWOOFER OUT terminal on the rear panel of this unit.

If you have connected the subwoofer, press and hold [S.WOOFER] for about 2 seconds so "SUB W ON" is shown on the display.

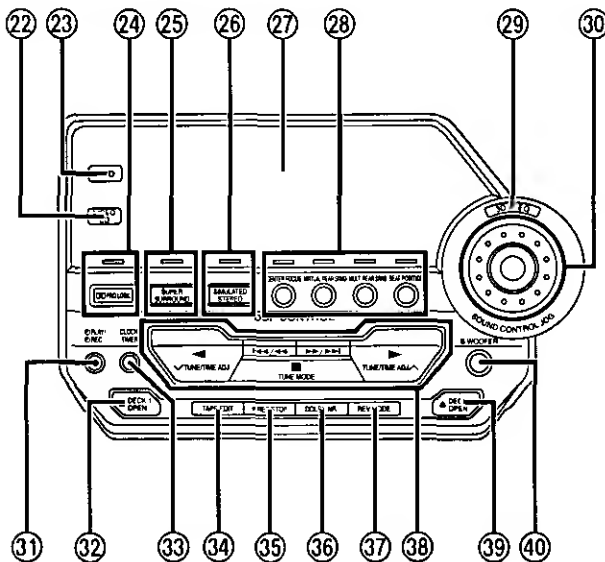
Note

The extra subwoofer can produce sound only when "DIGITAL" is selected.

A



B



Front panel controls

Main unit **A**

No.	Name	Ref. page
①	Disc manager button (DISC MANAGER)	26
②	CD edit button (CD EDIT)	35
③	Disc tray	16
④	AC supply indicator (AC IN)	13
This indicator lights when the unit is connected to the AC mains supply.		
⑤	Standby/on switch (POWER, \odot/I)	13
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.		
⑥	Eco mode button (ECO)	13
⑦	Input select buttons and indicators (DVD/CD, TUNER/BAND, TAPE DECK1/2, AUX1/2)	14, 17, 30, 54
⑧	DOLBY DIGITAL indicator (DD DIGITAL)	42
⑨	Still picture/pause button (II)	19
⑩	Slow/search buttons (\ll , \gg SLOW/SEARCH)	19
⑪	Headphones jack (PHONES)	54
⑫	Deck 1 cassette holder	30
⑬	Disc select buttons and indicators (DISC1-DISC5)	17
⑭	Disc tray open/close buttons (OPEN/CLOSE \blacktriangle 1-5)	16
⑮	Display select/demonstration button (-DISPLAY/-DEMO)	12, 54
⑯	Volume control (VOLUME)	15
⑰	Only for Asia and China	
⑱	Karaoke effect button (KARAOKE EFFECT)	49
⑲	Only for Asia and China	
⑳	Karaoke mode select button (KARAOKE)	47
㉑	Only for Asia and China	
㉒	Microphone volume control (MIC VOL)	47
㉓	Only for Asia and China	
㉔	Mixing microphone jacks (MIXING MIC)	47
㉕	Deck 2 cassette holder	30

Center console **B**

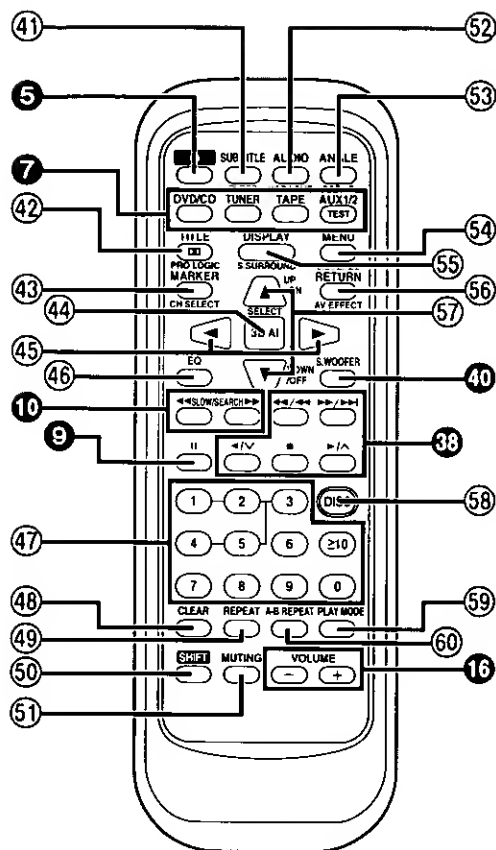
㉖	Video CD indicator (VIDEO CD)	
Lights regardless of the kind of disc in the unit.		
㉗	DVD indicator (DVD)	
Lights regardless of the kind of disc in the unit.		
㉘	DOLBY PRO LOGIC on/off button and indicator (DD PRO LOGIC)	43
㉙	Super surround on/off button and indicator (SUPER SURROUND)	44
㉚	Simulated stereo on/off button and indicator (SIMULATED STEREO)	46
㉛	Display	
㉜	AV effect buttons and indicators (CENTER FOCUS, VIRTUAL REAR SRND, MULTI REAR SRND, SEAT POSITION)	44, 45, 46
㉝	3D AI EQ button (3D AI EQ)	39
㉞	Jog control and joy stick (SOUND CONTROL JOG)	37
㉟	Play timer/record timer button and indicator (\odot PLAY/ \odot REC)	50, 51
㊱	Deck 1 open button (\blacktriangle DECK1 OPEN)	30
㊲	Clock/timer button (CLOCK/TIMER)	13, 50, 51
㊳	Tape edit button (TAPE EDIT)	36
㊴	Recording start/stop button (\bullet REC/STOP)	33
㊵	Only for Asia and China	
㊶	DOLBY NR on/off button (DOLBY NR)	30
㊷	Reverse mode select button (REV MODE)	30
㊸	Basic operating buttons	
Functions change according to the source.		
㊹	Deck 2 open button (\blacktriangle DECK2 OPEN)	30
㊺	Super woofer button and indicator (S.WOOFER)	37

Before use

Front panel controls

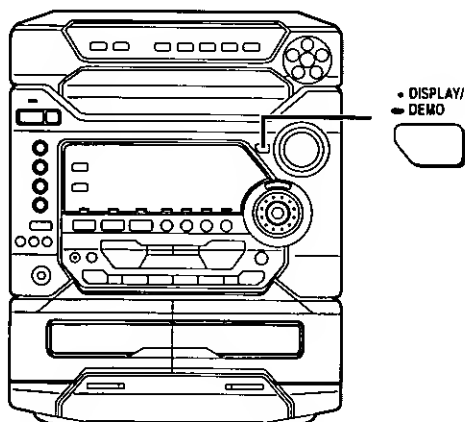
Remote control

Buttons such as ⑤ function in exactly the same way as the buttons on the main unit.



No.	Name	Ref. page
④①	Subtitle select button (SUB TITLE).....	24
④②	Title select button (TITLE).....	25
④③	Marker button (MARKER).....	21
④④	Select button (SELECT).....	17
④⑤	Left and right cursor buttons (◀, ▶).....	17
④⑥	EQ select button (EQ).....	37
④⑦	Numeric buttons (≥10, 1-0).....	22
④⑧	Clear button (CLEAR).....	21
④⑨	Repeat button (REPEAT).....	20
⑤①	Shift button (SHIFT).....	
⑤②	Muting button (MUTING).....	54
⑤③	Audio select button (AUDIO).....	24
⑤④	Angle select button (ANGLE).....	26
⑤⑤	Menu button (MENU).....	25
⑤⑥	Display button (DISPLAY).....	27
⑤⑦	Return button (RETURN).....	18
⑤⑧	Down/off, up/on cursor buttons (▼ DOWN/OFF, ▲ UP/ON).....	17
⑤⑨	Disc button (DISC).....	22
⑤⑩	Play mode select button (PLAY MODE).....	22
⑥①	A-B repeat button (A-B REPEAT).....	20

A



Using the [SHIFT] button

Functions labeled with orange letters are operated by pressing [SHIFT] then pressing the required button.

• [SLEEP].....	53	• [S.STEREO].....	46
• Only for Asia and China [KARAOKE].....	47	• [CH SELECT].....	42
• [SET UP].....	55	• [AV EFFECT].....	44
• [TEST].....	42	• [3D AI].....	39
• [PRO LOGIC].....	43	• [MIX 2CH].....	42
• [S.SURROUND].....	44	• Only for Asia and China [KARAOKE EFFECT].....	49

Turning the demo function off (DEMO) □

If the clock has not been set, a demonstration of the display is shown when the unit is off.

This function is set to on at the time of purchase.

To get the most from the ECO mode (→ page 13), turn the demo function off.

Press and hold [-DISPLAY/-DEMO] until "NO DEMO" is displayed.

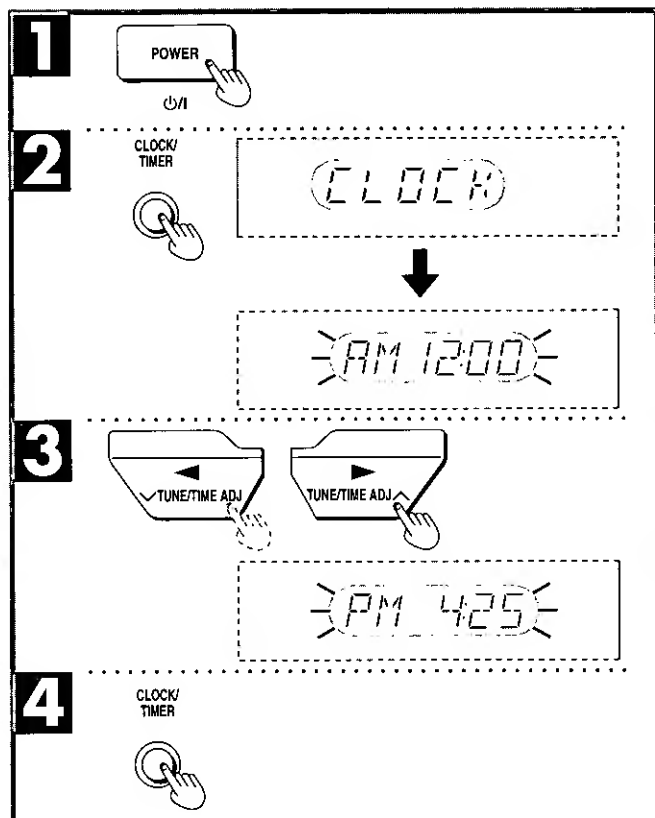
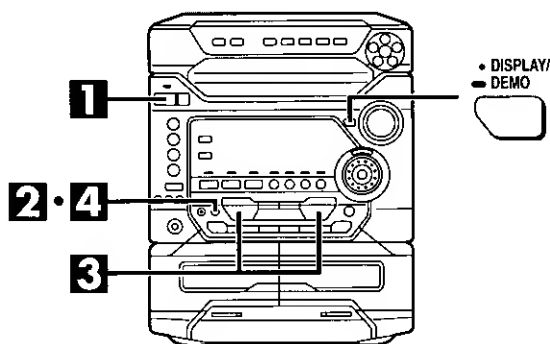
Every time you press and hold the button; NO DEMO (off) ⇄ DEMO (on)

• DISPLAY/
- DEMO

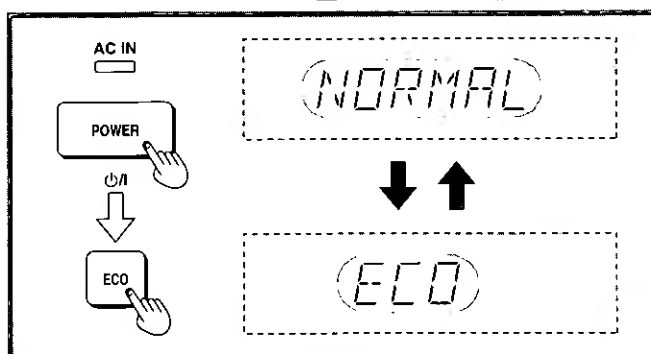
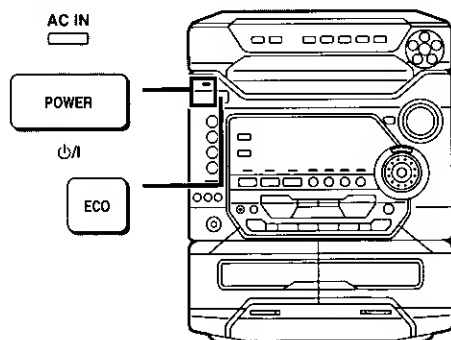


NO DEMO

A



B



Setting the time A

The example in the figure shows how to set the time for 4:25 p.m.

For U.S.A. and Canada: 12 hour clock

For others: 24 hour clock

- 1** Press [POWER] to turn the unit on.
- 2** Press [CLOCK/TIMER] to select "CLOCK".
Every time you press the button;
CLOCK → ⏻ PLAY → ⏻ REC
↑ Previous display ↓
- 3** (within 5 seconds or so)
Press [TUNE/TIME ADJ (✓ or ^)] to set the present time.
- 4** Press [CLOCK/TIMER] to finish setting the time.
The display will return to whatever was displayed before you set the time.

Displaying the clock

When the unit is off

When ECO mode is off;

The clock is displayed constantly.

When ECO mode is on;

Press [-DISPLAY/-DEMO].

The clock is displayed for about 5 seconds and then the display goes blank again.

When the unit is on

Press [CLOCK/TIMER] so "CLOCK" is shown.

The clock is shown for about 5 seconds then the previous display is restored.

ECO mode (ECO) B

Turn ECO mode on to reduce the amount of energy consumed while the unit is in standby mode.

This mode is set to on at the time of purchase.

	NORMAL (off)	ECO (on)
Display	Clock display, etc.	Blank
Power consumption in standby mode	14 W	0.6 W Only for Asia 1 W

The demonstration is shown if DEMO is on, regardless of the condition of the ECO mode. Turn DEMO off if ECO is used.

Turning ECO on and off:

Press [POWER] to turn the unit on.

Press [ECO].

The current mode is shown.

Press again to change the mode.

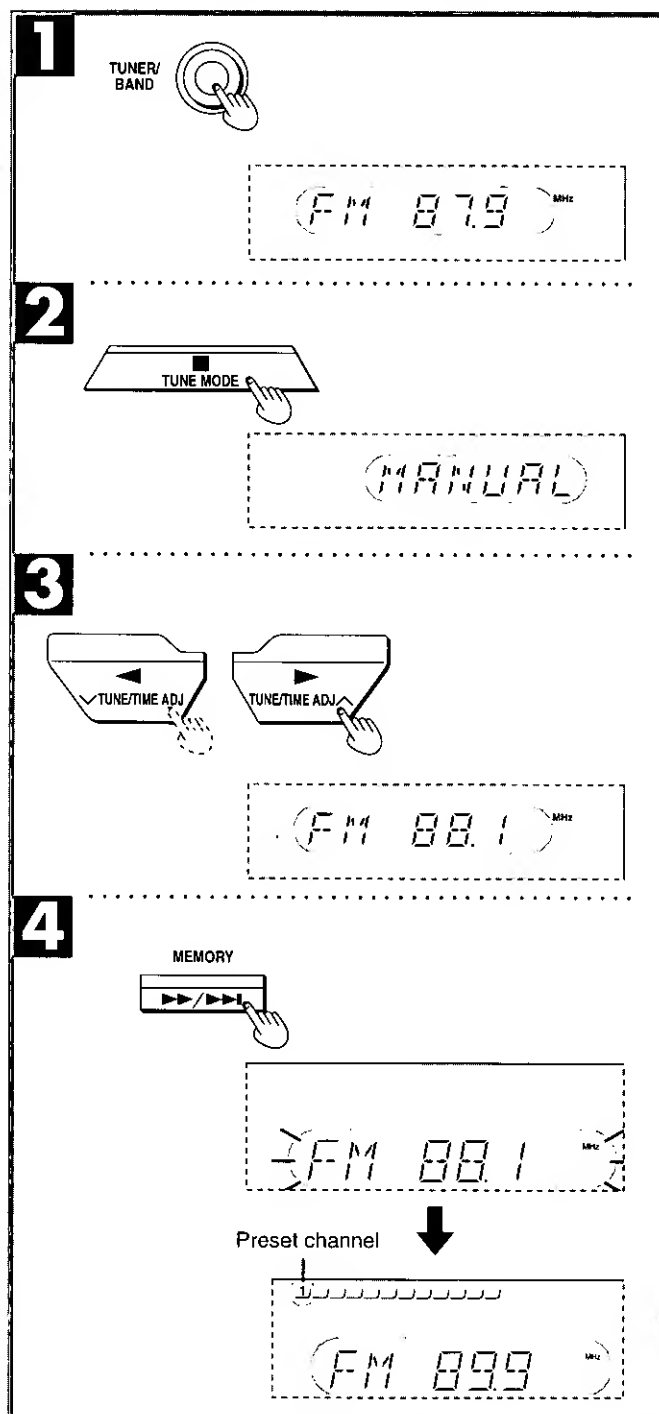
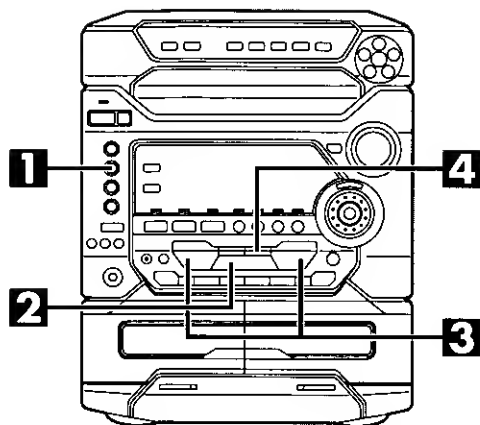
NORMAL (off) ↔ ECO (on)

When ECO is on:

When the unit is turned off, the display panel remains blank but the AC IN indicator stays to show the unit is still connected to the AC power output.

Note

When the unit is off, the mode can be switched from NORMAL to ECO, but not the other way.



Presetting radio broadcasts

- Up to 12 stations can be set in each band with automatic or manual memory presetting.
- If broadcast frequencies are preset in the memory, you can easily tune in any of these frequencies from the system or remote control unit.
- You can preset just those stations you like. (See "Presetting only your favorite stations" below.)

For your reference

Frequency displays are different according to the area.

1 Press [TUNER/BAND] to select band.

The power will come on automatically.

Every time you press the button; "FM" ↔ "AM".

2 Press [■, TUNE MODE] to select "MANUAL".

Every time you press the button; "MANUAL" ↔ "PRESET".

3 Press [TUNE/TIME ADJ (∨ or ∧)] until the display shows the frequency from which you want to begin automatic memory presetting.

- ① Hold down either [TUNE/TIME ADJ (∨ or ∧)] until the frequency numbers start scrolling.
- ② When near to the frequency you are looking for, press [TUNE/TIME ADJ (∨ or ∧)] repeatedly until the station is tuned in.

4 Press and hold [▶▶/▶▶I, MEMORY] until the frequency begins to change.

This will start presetting automatically. When finished, the radio will tune in the last station memorized.

If auto presetting is not possible because radio signals are weak or for some other reason, do the following.

Presetting only your favorite stations

1. Perform step 1 above. Then, press [▶▶/▶▶I, MEMORY] (the frequency flashes) and select a station with [TUNE/TIME ADJ (∨ or ∧)].
2. While the frequency is flashing press [▶▶/▶▶I, MEMORY] again and select a preset channel with [TUNE/TIME ADJ (∨ or ∧)].
3. Press [▶▶/▶▶I, MEMORY] to preset the station.

Memory retention

The preset stations are retained in memory for about 2 weeks even if the system is unplugged.

About allocation settings

Each country allocates broadcast band according to their particular needs.

For U.S.A. and Canada (0.2 MHz ↔ 0.1 MHz):

This unit can receive FM broadcasts allocated in 0.1 MHz steps.

For others (9 kHz ↔ 10 kHz):

This unit can receive AM broadcasts allocated in 10 kHz steps.

To change the steps

1. Press and hold [TUNER/BAND].
After a few seconds the display changes to a flashing display of a current minimum one.
2. Continue to hold [TUNER/BAND] down.
The minimum frequency changes and release the button.
To return to the original steps, repeat above steps.

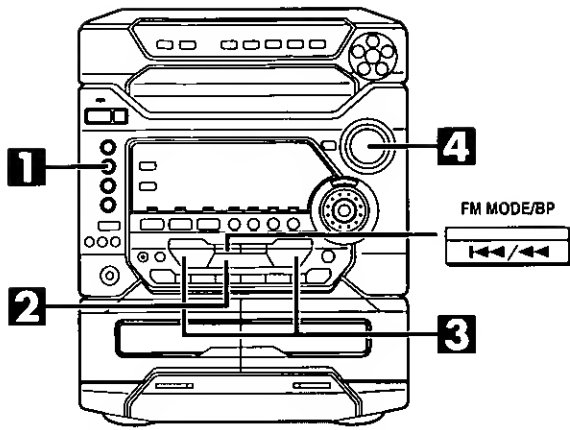
Note

After changing the allocation setting, the frequencies you previously preset in the memory will be cleared.

Listening to radio broadcasts

For your reference

Frequency displays are different according to the area.



1 Press [TUNER/BAND] to select band.

The unit comes on and the radio begins to play.
Every time you press the button; "FM" ↔ "AM".

2 Press [TUNE MODE] to select "PRESET" or "MANUAL".

Every time you press the button; "MANUAL" ↔ "PRESET".

PRESET: For preset stations

MANUAL: For non-preset stations

3 Press [TUNE/TIME ADJ (∨ or ∧)] to select the desired broadcast.

"STEREO" lights when an FM stereo broadcast is being received.

"TUNED" lights when you precisely tune in a broadcast station.

4 Turn [VOLUME] to adjust the volume level.

Auto tuning

Auto tuning is an easy way to tune in non-preset stations in the manual mode.

Hold down [TUNE/TIME ADJ (∨ or ∧)], and release the button when the frequency starts scrolling.

The frequency will stop automatically on the first station it picks up.

•When there is outside interference, the radio sometimes stops on a certain frequency where no station is broadcasting.

To stop auto tuning

Press [TUNE/TIME ADJ (∨ or ∧)] again.

If noise is excessive in the FM stereo mode A

Press [FM MODE/BP]. ("MONO" will light up.)

Sound will be produced in monaural, but this also reduces noise.

Press the button again to cancel. "MONO" will go out.

Normally, you'll want to listen in stereo, so leave "MONO" off. This way, you can listen to stereo broadcasts in stereo, and monaural broadcasts in mono.

You can preset an FM station in monaural by following the steps under "Presetting only your favorite stations" on page 14. After selecting the station in step 1, select "MONO" with [FM MODE/BP], then continue with steps 2 and 3.

Note

•If you preset stations in memory they can be easily selected from the remote control with [◀/∨], [▶/∧] or the numeric buttons.

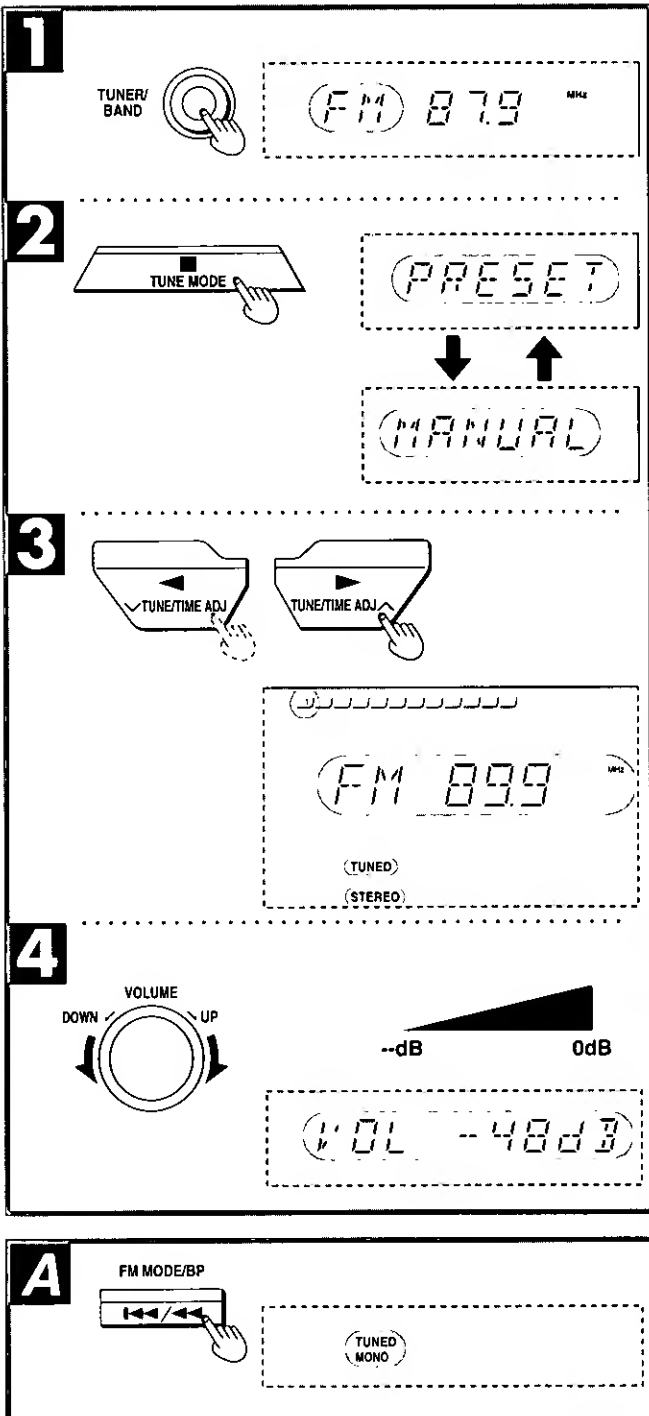
1. Press [TUNER] to select band on the remote control.

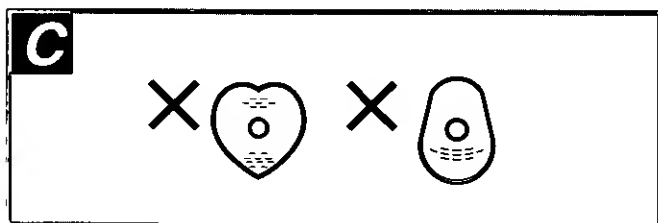
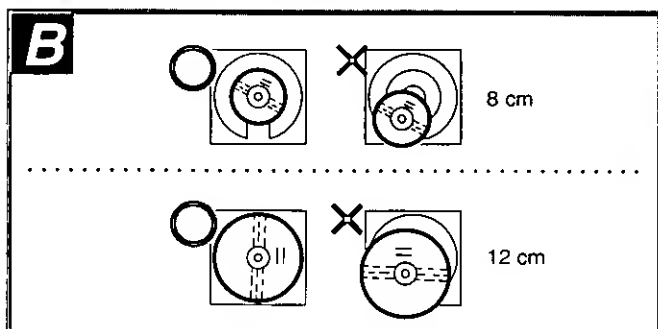
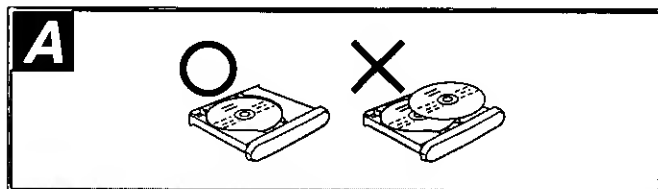
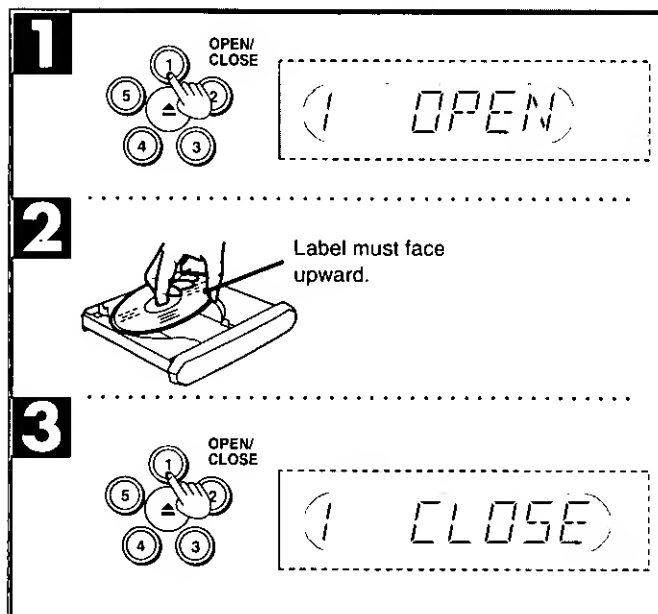
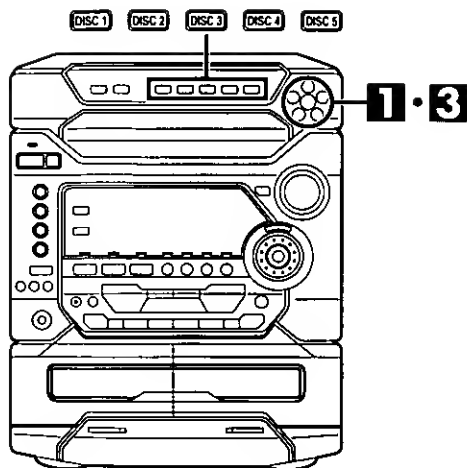
2. Press [◀/∨] or [▶/∧] to select the channel, or select the required channel directly with the numeric buttons.

To select a two-digit channel:

Press [≥10] and then the two numbers you want within 10 seconds or so.

•Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.





How to load discs

Always stop the changer before loading or changing discs. You cannot change discs while a disc is playing.

- 1** Press an [OPEN/CLOSE ▲ (1-5)] button.
The selected tray will open.
- 2** Set a disc in the tray.
- 3** Press the same [OPEN/CLOSE ▲ (1-5)] button.
 - The tray will close.
 - If "DVD/CD" is selected as the input source and a DVD or video CD with PBC is inserted, the Automatic Play function is activated. (Refer to the following article)

To continue loading discs in the other trays

Press another [OPEN/CLOSE ▲ (1-5)] button to open the required tray.
The current tray closes and the selected tray automatically opens.

Disc indicators (DISC1-DISC5)

These indicators light green to show a tray is in the playing position, whether it is loaded or not.

To prevent damage

Always observe the following points.

- Load only 1 disc per tray. **A**
- Load discs as shown in figure **B**.
- An adapter is not needed with 8 cm discs (singles).
- Set the system on a flat, level surface.
 - Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while trays are opening/closing, or when loaded.
- Do not put anything except discs in trays.
- Do not use cleaning discs or discs which are badly warped or cracked.
- Do not use discs with poorly attached labels or stickers.
 - Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to malfunction.
- Do not use irregular shaped discs. **C**

Automatic Play function

Most DVDs and Video CDs with PBC start playing if any of the following operations is performed:

- [OPEN/CLOSE ▲] is pressed to close the tray after inserting a disc.
- The power is turned on when a disc is in the changer and the input selector is set to "DVD/CD".
- When a disc is in the changer and "DVD/CD" is selected as the source with [DVD/CD] on the unit or the remote control.

Note

Press [■] to stop a disc if play starts while setting the timers or preparing to make a recording.

Playing discs

Before playing DVDs and Video CDs

The menu screen language has been factory preset to English. If you would like to change the menu language, please refer to "Selecting menu language" (→ page 56).

Some figures are slightly different for discs.

Normal play

DVD **V-CD** **CD**

Preparation:

Switch the TV on and set it to "Video" input when playing DVDs or video CDs.

1 Press [DVD/CD].

The power will come on automatically.

If the unit was off and a disc was loaded, play will start automatically (One touch play function).

2 Insert discs in the trays. (→ page 16)

3 Press [DISC1]–[DISC5] to select the disc you want.

When a menu screen appears on the TV monitor

In case of interactive DVDs or Video CDs with playback control, a menu screen appears on the TV monitor. Perform step 4 as follows.

4 by remote control only

① Press one of the cursor buttons (◀ ▶ ▼ ▲) to select the menu item.

② Press [SELECT].

- You can select the menu item by operating the Joystick (◀ ▶ ▼ ▲) on the main unit.
- You can also select the desired item by pressing the numeric button(s).

A different menu is displayed or play of the selected item will begin.

5 Turn [VOLUME] to adjust the volume level.

To stop the disc

Press [■].

Resume function is activated.

Resume function

"RESUME" is displayed when the Resume function is active.

Press [▶] and play resumes from the point it was last stopped at.

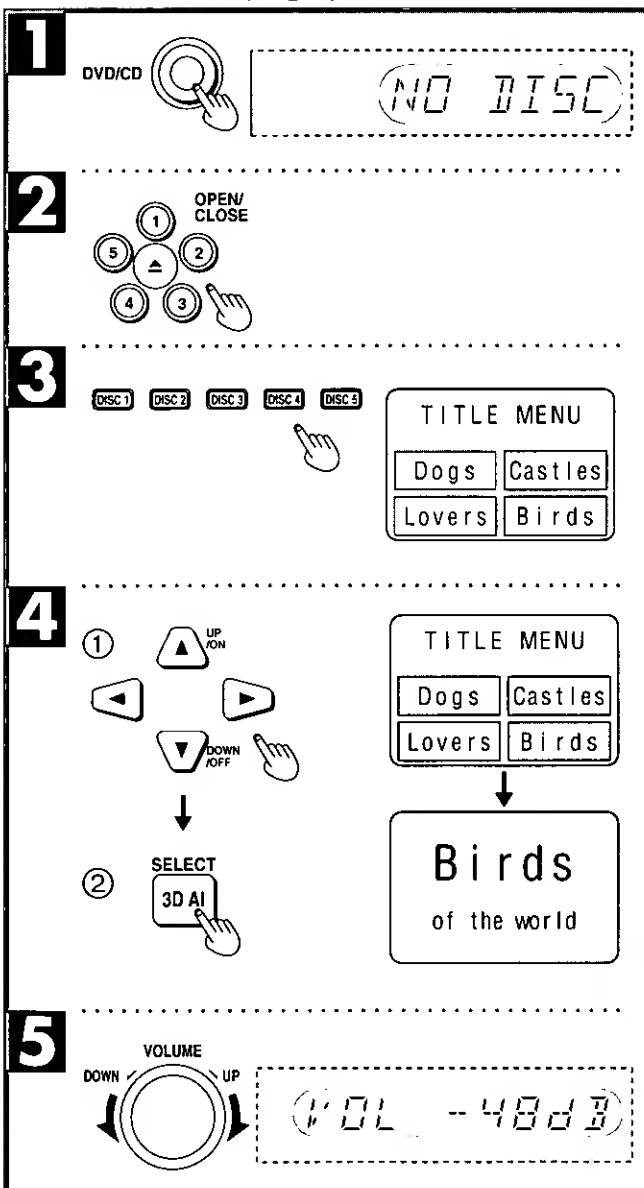
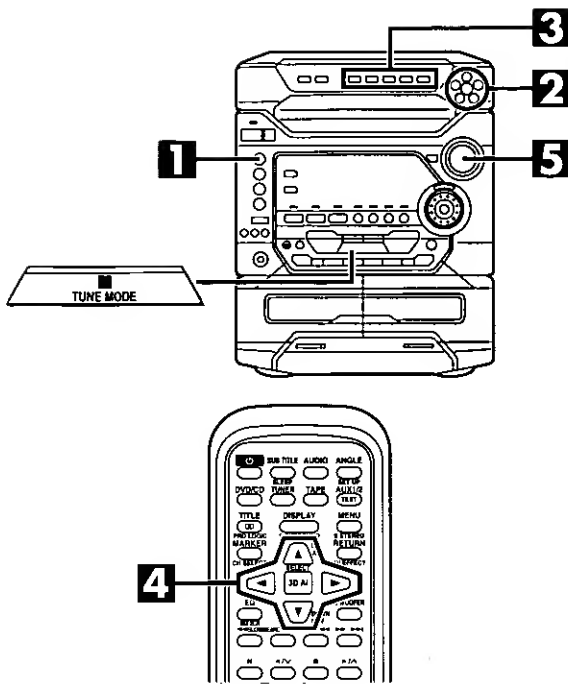
This position is kept in the memory even if the unit is turned off, so it is convenient when watching movies.

To cancel

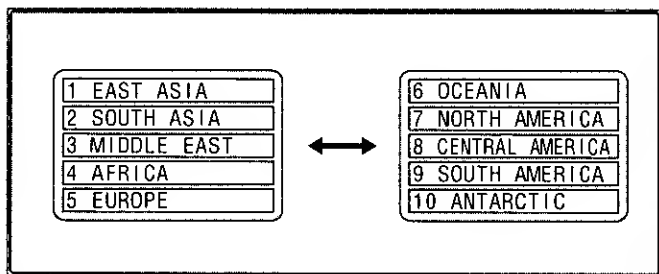
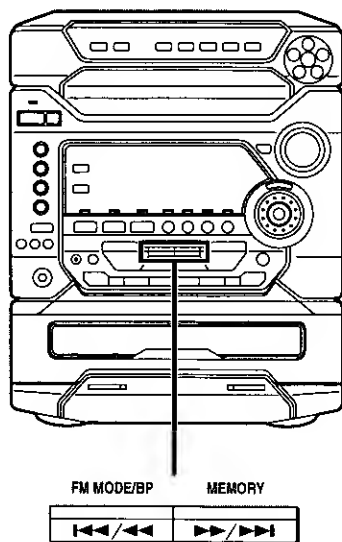
Press [■] while the unit is stopped.

Note

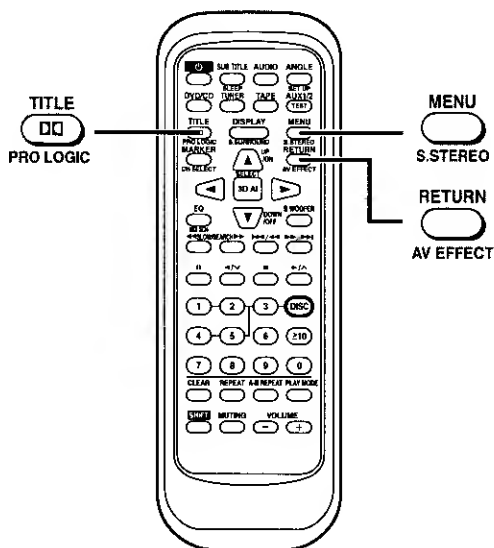
- This function only works on discs that have their elapsed time displayed during playback.
- This function may not work with some DVDs.
- Ensure this function has been canceled before recording.
- This function is automatically canceled by the following.
 - The tray is opened.
 - Another disc is moved to the playing position.



A



B



Playing discs

When the menu continues onto another screen **A**

After step **3** on page 17, press [▶▶/▶▶].

(Skip buttons may not be effective depending on the disc.)

- To return to the previous menu screen
Press [◀◀/◀◀].
- For operation, refer also to the jacket of the disc concerned.

To return to the menu screen **B**

by remote control only

With some discs, playback may start without showing the menu screen. To show the menu screen, do the following.

•DVD

Press [TITLE], [MENU] or [RETURN].
(Which button is pressed depends on the disc.)

•Video CD

Press [RETURN].

Note

The disc continues to rotate while the menu is displayed even after the unit has finished playing a particular item. When no further selections are to be played, be sure to press [■] to clear the menu display.

Chapter Play function (DVD only)

This function plays a few seconds of each chapter from the beginning of the title up to the point where operation was stopped at the second chapter or more.

When you play a DVD with chapters recorded on it, stop the disc:

- ① Press [▶].
The message, "PRESS PLAY to chapter preview", is shown on the TV.
- ② Press [▶] again while the message is on the TV.

When "NO DISC" appears on the display

It indicates there is no disc on the tray in the playing position or the disc is placed in upside down (and it is a single sided disc).

When "⊙" appears on the TV when a button is pressed

It indicates the corresponding operation is prohibited by the unit or the disc.

When "96kHz 24bit" appears on the display

This message indicates that the disc being played is a disc with high quality sound recorded with a sampling frequency of 96 kHz and 24 bits.

When "NO PLAY" appears on the display

It indicates that the disc being played does not correspond to the system, disc play cannot be done. (→ page 6)

Still picture (Pause)

A

DVD V-CD CD

Press [II] during play.

•DVD/Video CD:

The unit will be placed in the still picture mode.

•Audio CD:

The unit will be placed in the pause mode.

To return to normal play

Press [▶].

Normal play begins.

Skip function

B

DVD V-CD CD

Press [I◀/◀◀] or [▶▶/▶▶I] during play.

Forward	▶▶/▶▶I	A chapter (DVD) or a track (Video CD/CD) is skipped each time the button is pressed.
Backward	I◀/◀◀	When the button is pressed once midway through a chapter/track, play returns to the beginning of that chapter/track. When it is pressed again, a chapter/track is skipped each time the button is pressed.

For your reference

When [I◀/◀◀] or [▶▶/▶▶I] is pressed during play of DVDs/Video CDs, a menu screen may sometimes be recalled.

Search function

C

DVD V-CD CD

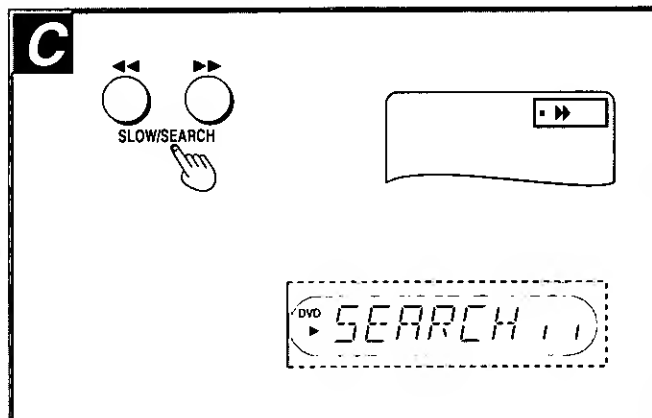
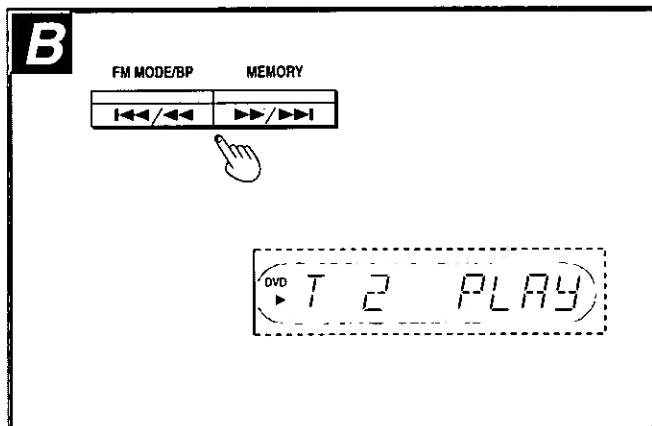
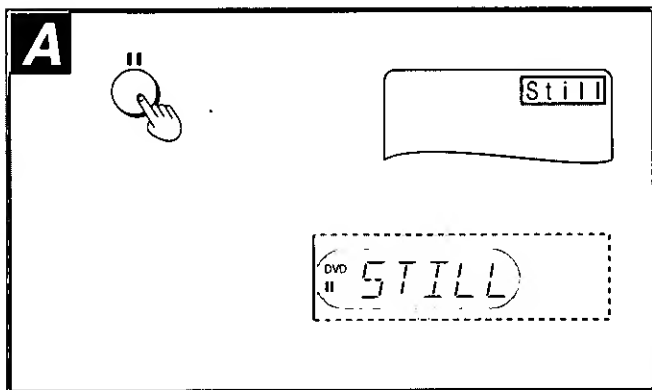
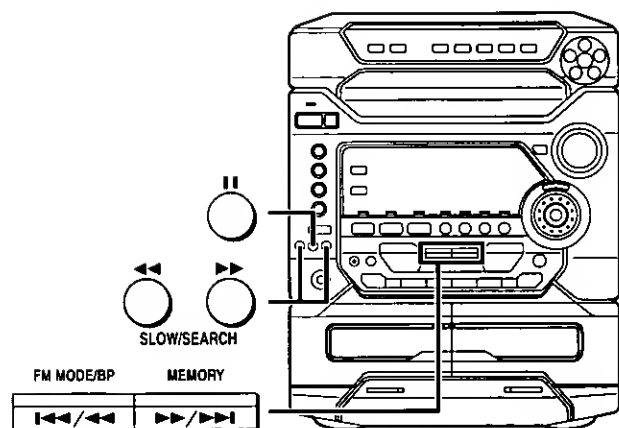
Press [SLOW/SEARCH (◀◀ or ▶▶)] during play.

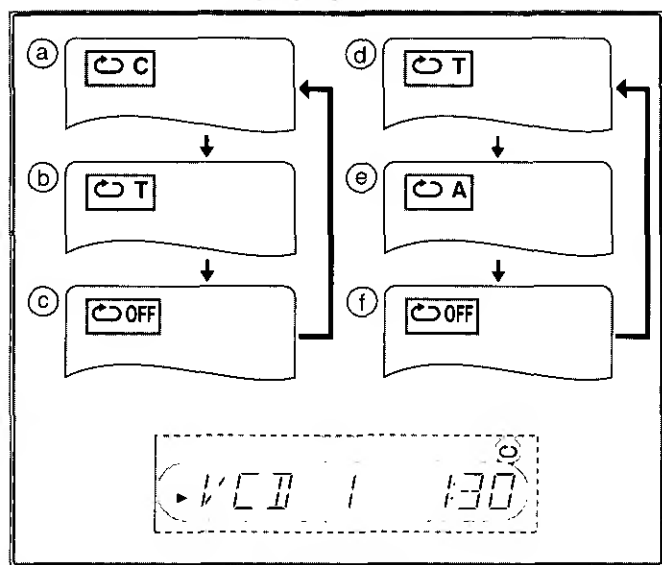
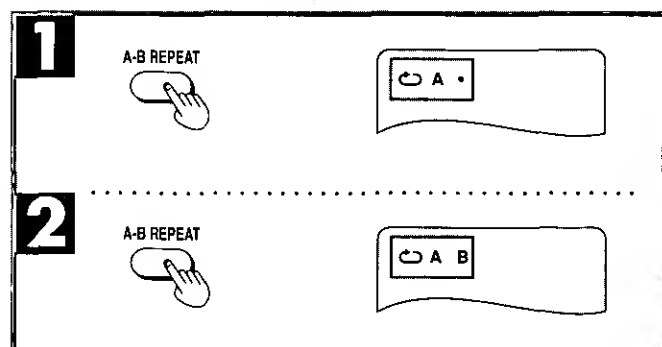
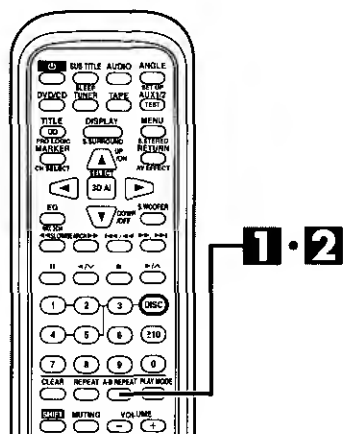
The speed of search is relatively slow at first. When the button is pressed again, the speed becomes faster. (Each time the button is pressed, the speed increases up to 5 steps.)

To return to normal play

Press [▶].

Normal play begins.



**B**

Repeat function

DVD V-CD CD

by remote control only

Repeat play **A**

- Repeat function works only with discs for which the elapsed playing time appears on the display during playback.
- Repeat function may not work correctly with some DVDs.

Press [REPEAT] during play.

Each time this button is pressed, the TV monitor changes as shown and the disc will repeat a chapter, title or a track.


● DVD

- Ⓐ Repeat of chapter/"CHAPTER REPEAT"
- Ⓑ Repeat of title/"TITLE REPEAT"
- Ⓒ Cancel repeat mode/"REPEAT OFF"

- Video CD/Audio CD

- Ⓓ Repeat of track/"TRACK REPEAT"
- Ⓔ Repeat of entire disc contents/"ALL REPEAT"
- Ⓕ Cancel repeat mode/"REPEAT OFF"

To cancel repeat play

Press [REPEAT] until "  OFF" (on TV) or "REPEAT OFF" (on this unit) is displayed.

To enjoy program repeat play

If [REPEAT] is pressed during program play (→ page 23), the mode changes as follows:

Repeat of programmed track.

Repeat of all programs

Cancel repeat mode
(Normal program play)

For your reference

Use the Disc Manager function if you want to listen to all discs repeatedly.

Repeating a specific section (A-B REPEAT)

A-B repeat function may not work correctly with some discs.

- 1** Press **[A-B REPEAT]** during play at the point where repeat play is to commence (A).
- 2** Press **[A-B REPEAT]** at the point where repeat play is to be concluded (B).

The selected section plays repeatedly.

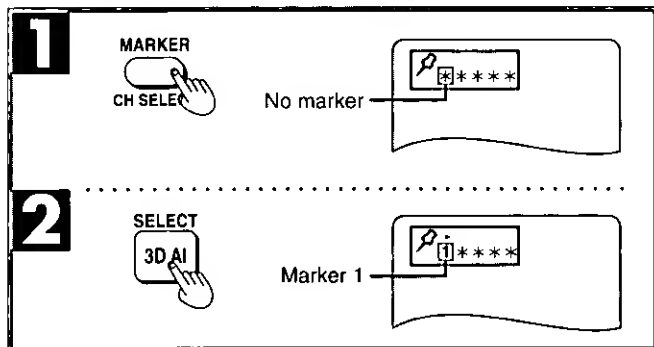
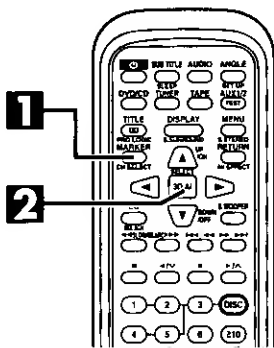
To cancel A-B repeat play

Press **[A-B REPEAT]** until " ● ●" is displayed.

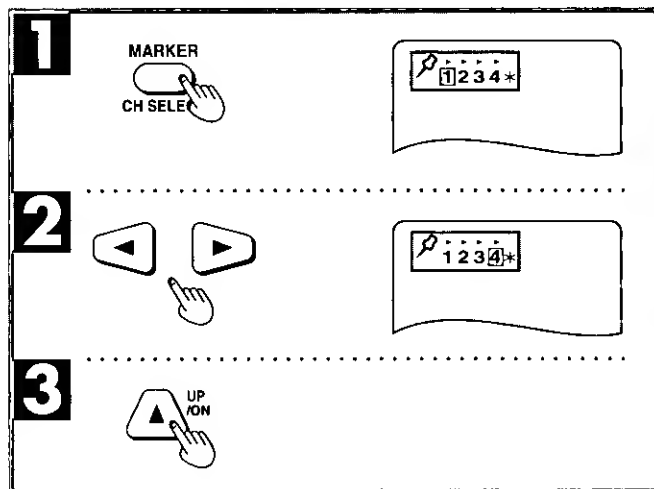
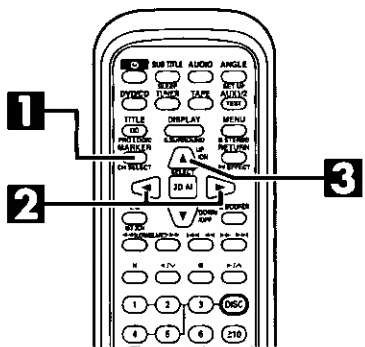
Note

- A-B repeat play works only within a title (DVD) or a track (Video CD/Audio CD).
- Some subtitles recorded around point A or B may fail to appear (DVD).

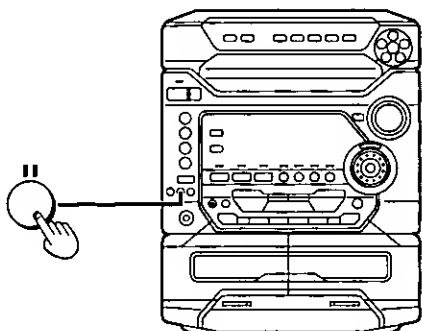
A



B



C



Other playing methods for discs

Storing markers in memory to be viewed (listened) again

DVD V-CD CD

Marker functions work only with discs for which the elapsed playing time appears on the display during playback.

by remote control only

Storing a marker in the memory

- 1** Press [MARKER] during play.
- 2** Press [SELECT] during play at the starting point to be viewed (listened) again.

Up to 5 markers can be stored in the memory.

To clear the display

Press [MARKER].

To store the second marker in the memory

While MARKER display appears,

- ① Press [▶].
- ② Press [SELECT].

Recalling a marker

- 1** Press [MARKER] during play.
- 2** Press [◀] or [▶] to select the marker you want to recall.
- 3** Press [▲] to recall a marker.
Play resumes from the point corresponding to the selected marker.

To clear a marker

Press [CLEAR] in step 3.
The selected marker is cleared.

Note

- You can't use the Marker function during program play, random play or the PBC mode.
- Some subtitles recorded around the marker may fail to appear (DVD).

For your reference

All the markers are cleared when the power is turned off, the disc is removed or sound source is switched.

Frame advance

DVD V-CD

Press [II] in the still picture mode. (→ page 19)

The disc is advanced by one frame each time the button is pressed.

For consecutive frame advance, press [◀] or [▶].

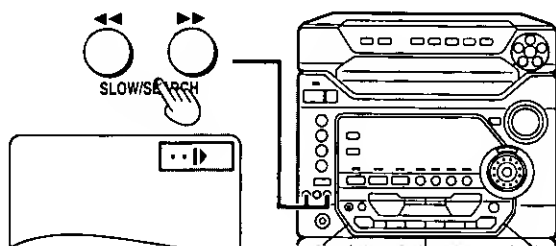
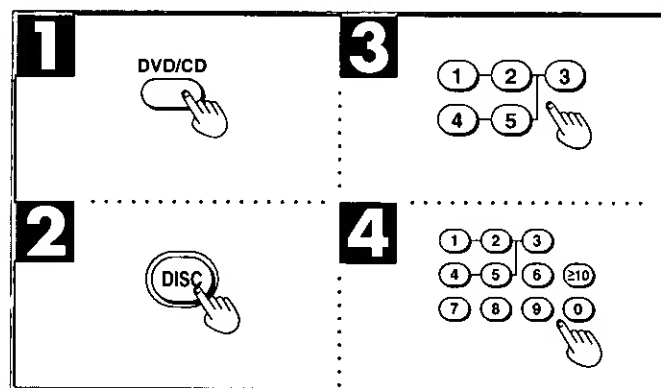
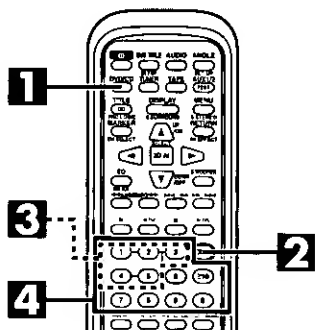
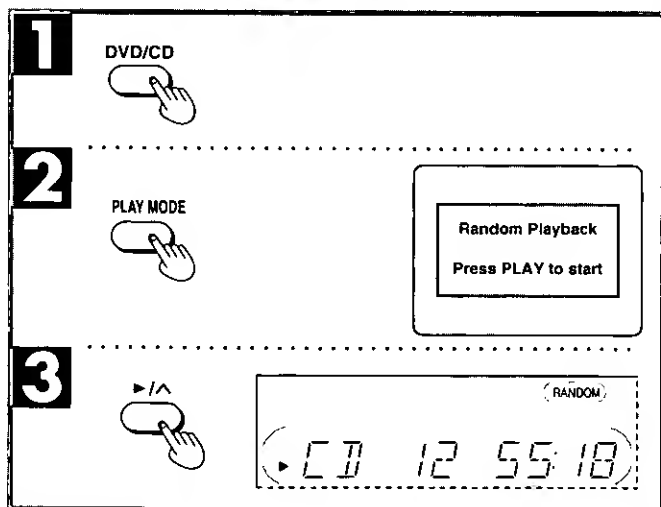
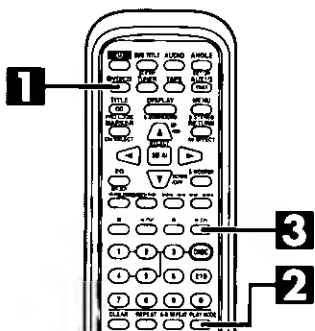
[◀]: Backward (DVD only)

[▶]: Forward (DVD, Video CD only)

To return to normal play

Press [▶].

The normal play begins.

A**B****C**

Other playing methods for discs

Slow-motion play

DVD V-CD

Press [SLOW/SEARCH (◀◀ or ▶▶)] in the still picture mode. (→ page 19)

The speed is slow at first. When the button is pressed again, the speed becomes faster. (Each time the button is pressed, the speed increases up to 5 steps.)

To return to normal play

Press [▶].

The normal play begins.

Playing from the desired track

V-CD CD

by remote control only

This function works with video CDs without PBC and audio CDs.

1 Press [DVD/CD].

2 Press [DISC].

3 Press [1]–[5] to select the desired disc.

After the disc has been changed, play begins from the first track on the selected disc.

4 When the first track play begins:

Press the numeric button(s) to select the desired track number.

To select a two-digit track

Press [≥10] and then the two numbers you want within 10 seconds or so.

For example:

Track no. 20: [≥10]→[2]→[0]

Track no. 35: [≥10]→[3]→[5]

Random play

V-CD CD

by remote control only

This function works with video CDs without PBC and audio CDs.

1 Press [DVD/CD].

2 Press [PLAY MODE] to select "RANDOM" in the stop mode.

Each time the button is pressed,

PRGM → RANDOM

off ←

3 Press [▶/△].

After playback

Play is stopped and the random play screen is displayed.

To cancel random play

Press [PLAY MODE] to select "off" in the stop mode.

Program play

[V-CD] [CD]

by remote control only

- This function works with video CDs without PBC and audio CDs.
- This function allows you to program up to 18 tracks.
- You can operate the program play function interactively in conjunction with the TV set.

1 Press [DVD/CD].

2 Press [PLAY MODE] to select "PRGM" in the stop mode.

Each time the button is pressed,

PRGM → RANDOM

← off →

3 **①** Press one of cursor buttons (◀ ▶ ▼ ▲) until the desired track number is selected.

② Press [SELECT].

You can also select the desired track number by using the numeric button(s).

The selected track is stored in the memory.

Repeat step **3** until you have programmed all tracks you want.

4 Press [▶/▲].

Play will start in the programmed sequence.

After playback

Play is stopped and the program play screen is displayed.

To cancel program play

Press [PLAY MODE] to select "off" in the stop mode.

To clear the programmed contents

When the program play screen is displayed

• To clear the programmed track in order from the last track

Press one of cursor buttons to select "Clear last" and press [SELECT].

Pressing [CLEAR] also clears the last programmed track.

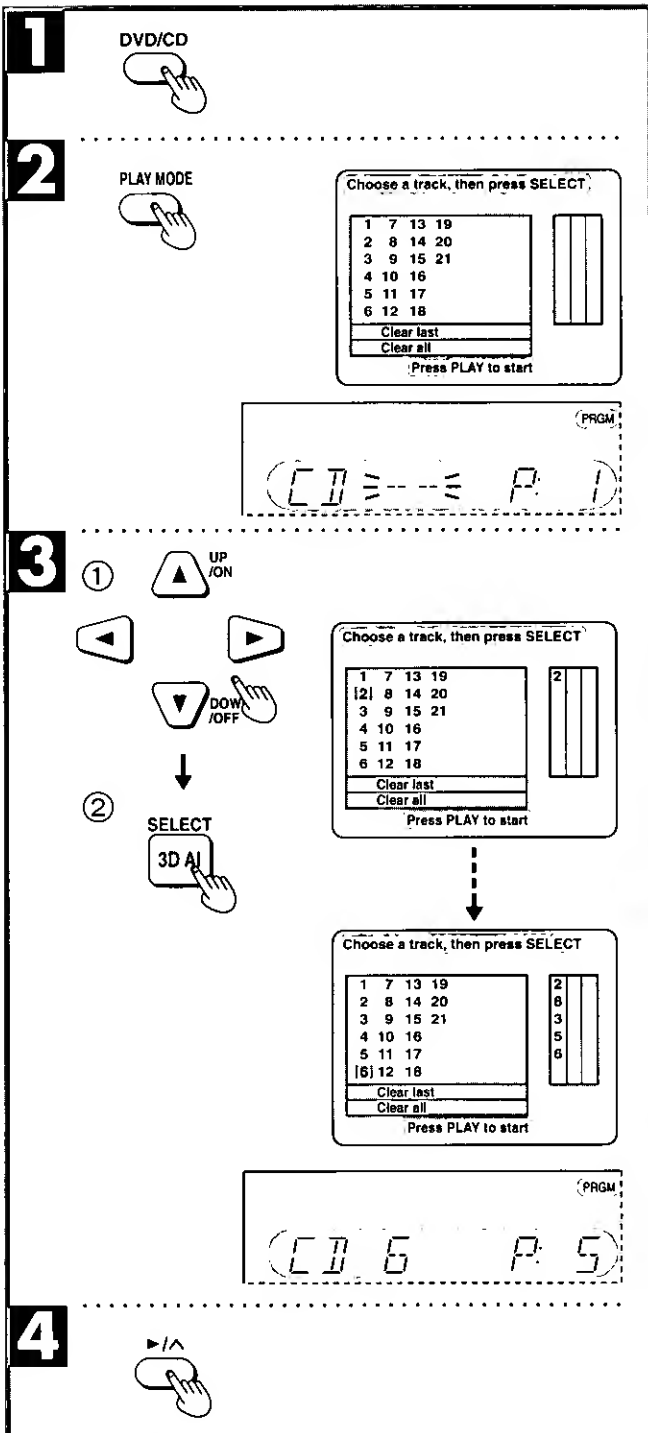
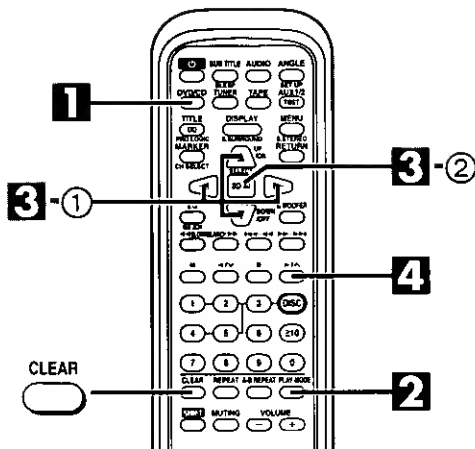
• To clear the entire program

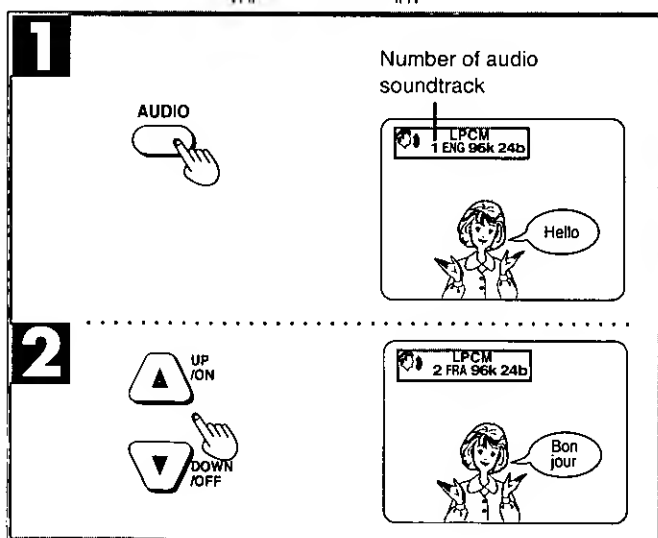
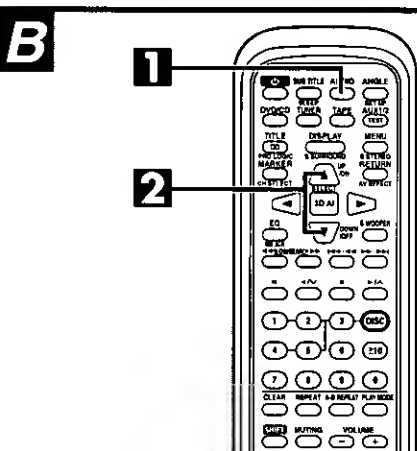
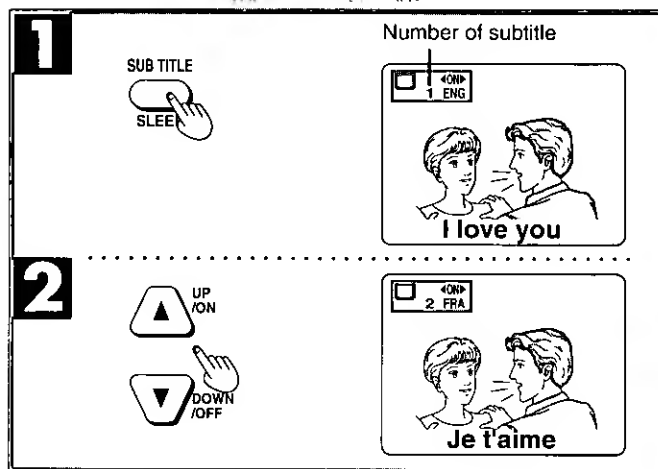
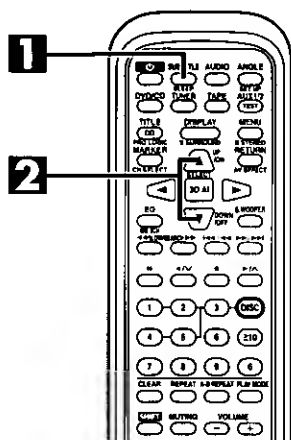
Press one of cursor buttons to select "Clear all" and press [SELECT].

Programs are cleared when the power is turned off, the disc is removed or sound source is switched.

Note

The program play function cannot be used when connected to a PAL TV.



A

Other playing methods for discs

Changing subtitle language **A**

DVD

- It is possible to change the subtitle language from the one selected at the initial settings to a different language, if available.
- This operation works only with discs on which multiple subtitle languages are recorded.

by remote control only

1 Press [SUB TITLE] during play.

When no subtitles are recorded "--" will be displayed instead of the language number.

2 Press [▲] or [▼] until the desired language is selected.

Pressing the numeric button(s) also changes the subtitle language.

To clear the display

Press [SUB TITLE] or [SELECT].

To clear/display the subtitles

Press [◀] or [▶] to select ON or OFF at the step 2.

Note

The subtitle language may not change immediately.

For your reference

- When the preferred language is not selected even after pressing [▲] or [▼] several times, it means that the language is not available on the disc.
- When the power is turned on or the disc is removed, subtitles appear in the language selected at the initial settings.

Changing audio soundtrack language **B**

DVD

- It is possible to change the audio soundtrack language from the one selected at the initial settings to a different language, if available.
- This operation works only with discs on which multiple audio soundtrack languages are recorded.

by remote control only

1 Press [AUDIO] during play.

When no audio soundtrack is recorded, "--" will be displayed instead of the language number.

2 Press [▲] or [▼] until the desired language is selected.

Pressing the numeric button(s) also changes the audio soundtrack language.

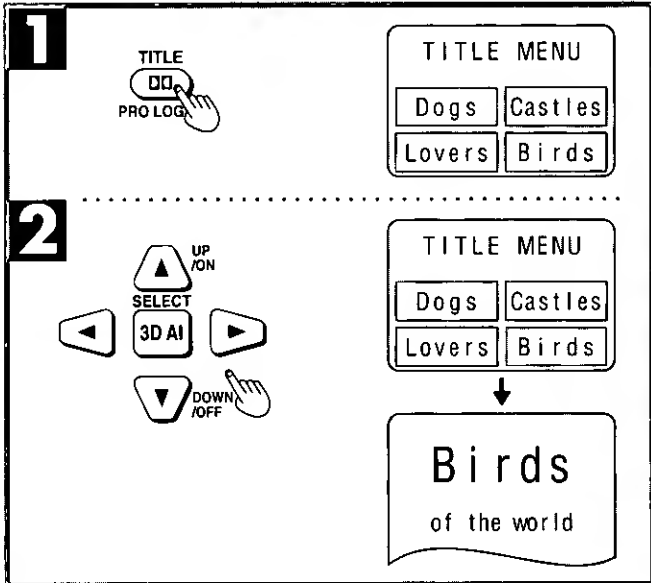
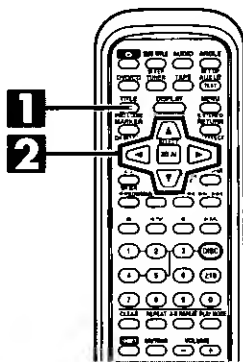
To clear the display

Press [AUDIO] or [SELECT].

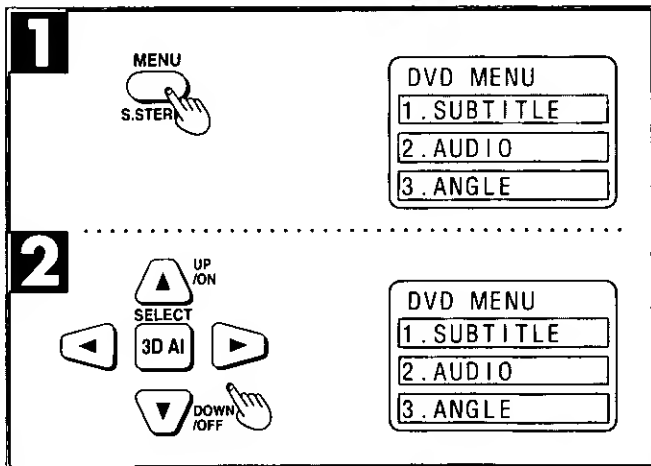
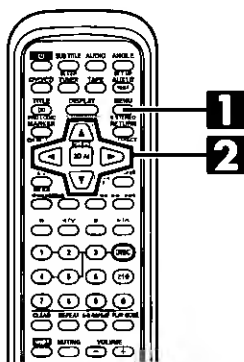
For your reference

- When the preferred language is not selected even after pressing [▲] or [▼] several times, it means that language is not available on the disc.
- When the power is turned on or the disc is removed, the language heard is the one selected at the initial settings.

A



B



Other playing methods for discs

Using a title menu

DVD

- Some discs with movies, for example, may be available with two or more titles. If the disc has a title menu recorded on it, the [TITLE] button can be used to select the movie title.
- The details of operation depend on the disc used.

by remote control only

1 Press [TITLE] during play.

A list of the titles on the disc is displayed.
Pressing [TITLE] again resumes play from the scene when [TITLE] was first pressed.

2 ① Press one of cursor buttons (◀ ▶ ▼ ▲) until the desired item is selected.

② Press [SELECT].
You can also select the desired title by using the numeric button(s).

Using a DVD menu

DVD

Some DVDs have unique menu structures called DVD menus. For example, DVDs programmed with complex contents provide guide menus, and those recorded with various languages provide menus for audio and subtitle language. Although the DVD menu's contents and operation differ from disc to disc, the following explains basic operation when this feature is used.

by remote control only

1 Press [MENU] during play.

The DVD menu available on the disc is displayed.
Pressing [MENU] again resumes play from the scene when [MENU] was first pressed.

2 ① Press one of cursor buttons (◀ ▶ ▼ ▲) until the desired item is selected.

② Press [SELECT].
You can also select the desired item by using the numeric button(s).

When the menu continues onto another screen

Repeat step 2.

Other playing methods for discs

Viewing from another angle

DVD

- Some DVDs may contain scenes which have been shot simultaneously from a number of different angles. For these discs, the same scene can be viewed from each of these different angles using the [ANGLE] button. (The angles depend on the disc used.)
- This function only works when "ANGLE" is alight.

by remote control only

- Press [ANGLE] during play.
- Press [▼] or [▲] until the desired angle is selected.
Pressing the numeric button(s) also changes the angle.

To clear the display

Press [ANGLE] or [SELECT].

Using the Disc Manager function

CD

This function allows you to playback up to 5 CDs in succession or repeatedly.

This function skips any discs that require interactive operation (DVDs and Video CDs) and plays through to the final disc.

- Press [DISC MANAGER] to select the desired method in the stop mode.

Every time you press the button;

- ALL DISC: to playback all discs in succession
- ALL DISC REPEAT: to playback all discs repeatedly
- 1-DISC: to playback 1 disc only on all loaded discs

- Press [▶].
Playback begins.
Alternatively you can press [DISC1]–[DISC5] to begin playback from a specific disc.

To cancel the Disc Manager

Press [DISC MANAGER] to select "1-DISC" in the stop mode.
Cancel can be also accomplished by pressing [■].

What is mean by "final disc"?

For example;

If play starts from disc 4, disc 3 will be the "final disc".

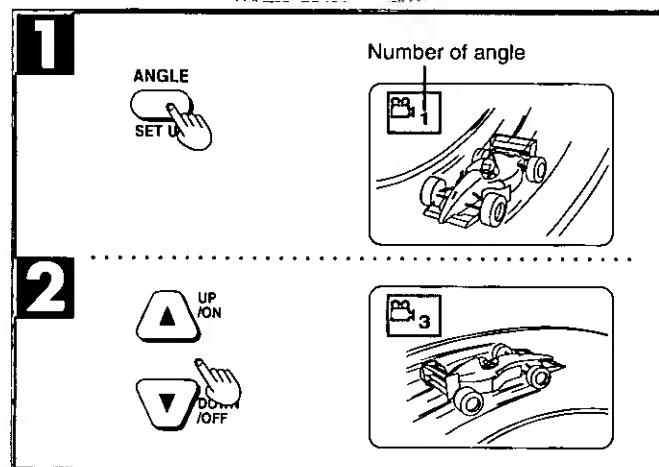
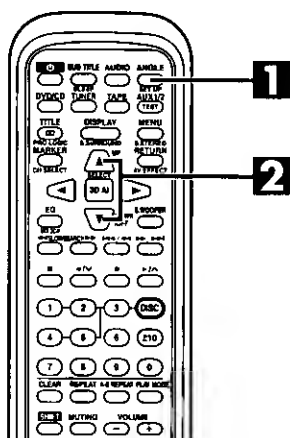
Order of progression

Disc 4→5→1→2→3

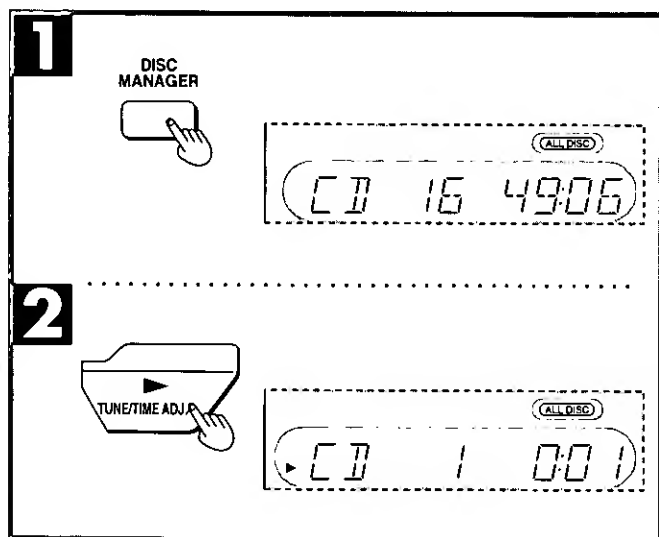
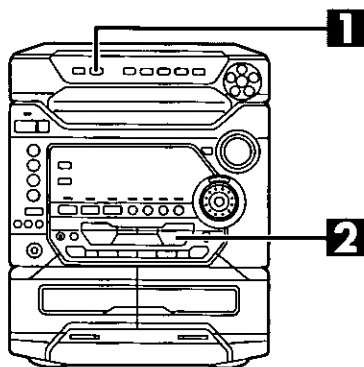
When a DVD or a Video CD is in the play position

You can select "ALL DISC" or "ALL DISC REPEAT", but during play, this function is cancelled to "1-DISC" mode.

A



B



Using GUI screens

This system features GUI (Graphical User Interface) screens consisting of icons showing disc information and changer information. Some icons only show the indicated information. Other icons allow the settings to be changed. You can operate this system interactively by using GUI screens.

Example of GUI screens

(Screens differ with disc contents.)

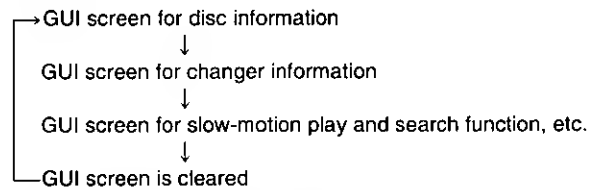
- DVD (A)
- Video CD (B)
- CD (C)

Common procedures

by remote control only

1 Press [DISPLAY] during play or in the stop mode.

Each time this button is pressed, the screen changes as shown below.



Some functions cannot be accessed in the stop mode.

2 Press [◀] or [▶] to select the desired item.

The currently selected item is indicated by the yellow frame on the GUI screen.

3 Press [▼] or [▲] to set the condition.

- When numbers are displayed (e.g. title No.), the numeric buttons are also effective for setting instead of [▼] or [▲].
- For some functions, the setting will be registered immediately; for others, [SELECT] must be pressed.

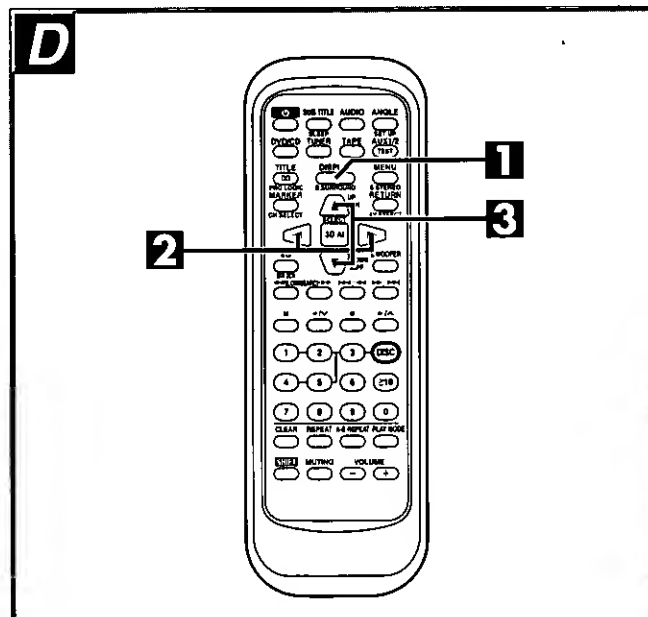
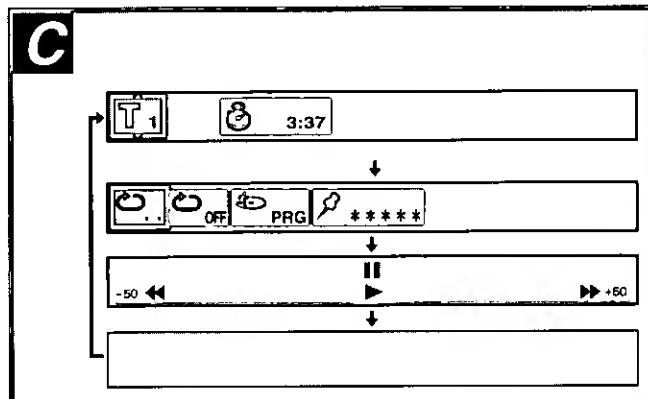
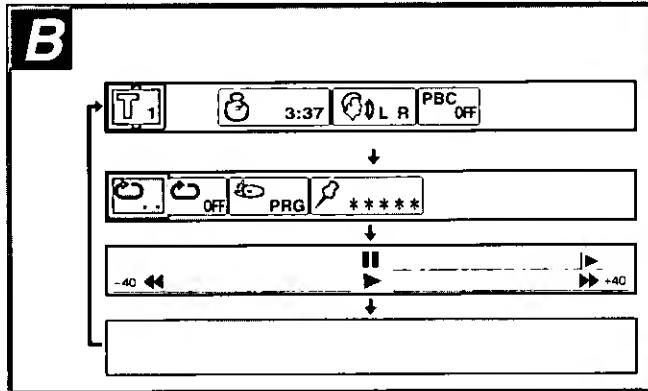
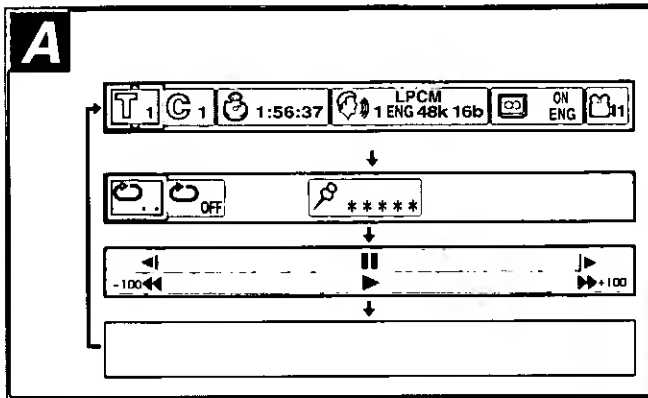
To clear the GUI screen

Press [DISPLAY], [RETURN] or [CLEAR].

For your reference



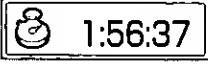
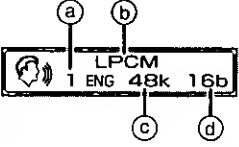

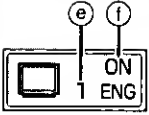



Depending on the type of DVD discs and a TV with automatic picture zoom function enabled, the GUI screen may not be displayed or only partially displayed on the TV screen.

In this case, select the appropriate TV screen type.



GUI icon descriptions

Screen for disc information

	Remarks	Changing method
	To show the current title No. (DVD) or track No. (Video CD/Audio CD)	[▼][▲] or Numeric/[SELECT]* ¹
	To show the current chapter No.	DVD only [▼][▲] or Numeric/[SELECT]
	To show the elapsed time	Numeric/[SELECT]* ²
	a To show the current audio soundtrack language No.	DVD only [▼][▲] or Numeric (⇒ page 24)
	b To show the audio attribute (type) of the current disc • LPCM (Linear PCM), MPEG (MPEG audio) or  Dolby Digital	DVD only
	c To show the audio attribute (sampling frequency or channel No.) of the current disc • For Linear PCM disc: 48 kHz or 96 kHz • For Dolby Digital disc: 1ch to 5.1ch • For MPEG audio disc: 1ch to 5ch	—
	d To show the audio attribute (bit No.) of the current disc • For Linear PCM disc: 16 bit to 24 bit	—
	e To show the current subtitle language No.	DVD only [▼][▲] or Numeric (⇒ page 24)
	i To display/clear subtitles	DVD only [▼][▲]
	To show the current angle No.	DVD only [▼][▲] or Numeric (⇒ page 26)
	To show the current audio mode • LR, L or R	[▼][▲]
	To show whether Video CD menu play is ON or OFF	VCD only —

• [▼][▲] mean pressing the cursor buttons on the remote control and "Numeric" means pressing the numeric buttons.

*¹The track number cannot be selected during menu play of the Video CD.

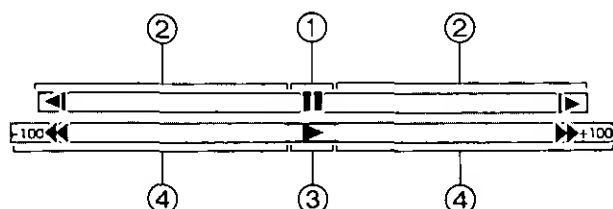
*²This function does not work with some DVDs.

Language abbreviations

For the language abbreviations used for the audio soundtrack and subtitle language icons, see the following table.

ENG	English	FRA	French	DEU	German
ITA	Italian	ESP	Spanish	NLD	Dutch
SVE	Swedish	NOR	Norwegian	DAN	Danish
POR	Portuguese	RUS	Russian	JPN	Japanese
CHI	Chinese	KOR	Korean	MAL	Malay
VIE	Vietnamese	THA	Thai	*	Others

Screen for slow-motion play and search function, etc.



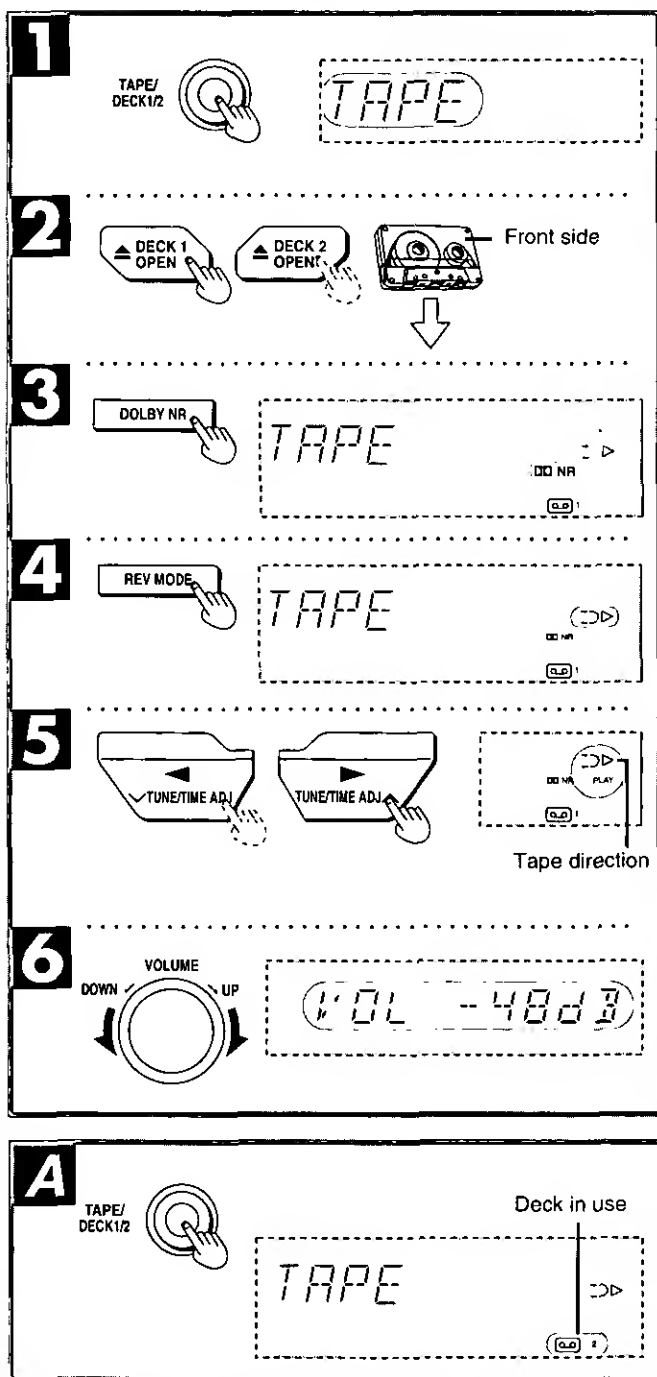
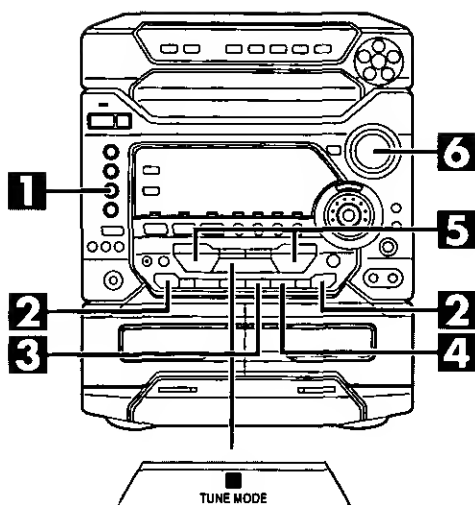
① Still/Pause
Press [▲] to select "II".
② Slow-motion play
1. Press [▲]. 2. Press [◀] or [▶].*
◀I: Backward (DVD only) I▶: Forward (DVD/Video CD only)
③ Play
Press [▼] or [SELECT] to select "▶".
④ Search function
Press [◀] or [▶].*
◀◀: Backward ▶▶: Forward

*Each time [◀] or [▶] is pressed, the speed increases in 5 steps.

Screen for changer information

	Remarks	Changing method
A	To start A-B repeat play (⇒ page 20)	[SELECT] ↓ [SELECT]
B	To select the repeat play mode (⇒ page 20) •C (chapter repeat), T (title repeat) or OFF (normal play) (DVD) •T (track repeat), A (disc repeat) or OFF (normal play) (Video CD/Audio CD)	[▼][▲]
C	To show the current play mode (Video CD/CD only) (⇒ pages 22 and 23) •"----" (normal play), PRG (program play) or RND (random play)	—
D	To store a marker To recall a marker To clear a marker (⇒ page 21)	[SELECT] [◀] [▶] → [▲] [◀] [▶] → [CLEAR]

- [◀] [▶] [▼] [▲] mean pressing the cursor buttons on the remote control.
- This function does not work with interactive DVDs or during menu play of Video CDs.



Listening to tapes

Types of tapes which can be played correctly:

The unit automatically identifies the type of tape.

NORMAL POSITION/TYPE I	○
HIGH POSITION/TYPE II	○
METAL POSITION/TYPE IV	○

You can use either deck 1 or deck 2 for tape playback.

1 Press [TAPE DECK 1/2].

The power will come on automatically.

If the unit was off and a cassette was loaded, play will start automatically (One touch play function).

2 Press [▲ DECK 1 OPEN] or [▲ DECK 2 OPEN] and insert the tape.

Insert the tape with the exposed tape facing down. Close the holder by hand.

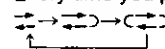
3 Only for Asia and China Press [DOLBY NR].

You have to turn DOLBY NR ON/OFF according to the type of recording you made.

Every time you press the button; ☐ NR → off

4 Press [REV MODE] to select the reverse mode.

Every time you press the button;



→: One side is played, then playback stops automatically.

↔: Both sides (front side → reverse side) are played one time each, then playback stops automatically.

↔↔: Both sides are played 8 times each, then playback stops automatically.

5 Press [◀] or [▶] to start playback.

[▶]: The forward side (front side) will play.

[◀]: The reverse side will play.

6 Turn [VOLUME] to adjust the volume level.

To stop tape playback

Press [■].

To change the deck to be used

Press [TAPE DECK 1/2] to select the deck you want to use when you load cassettes into both decks.

To listen to 2 tapes consecutively

Load a tape into each deck and select ↔↔. Both tapes will be played 8 times each.

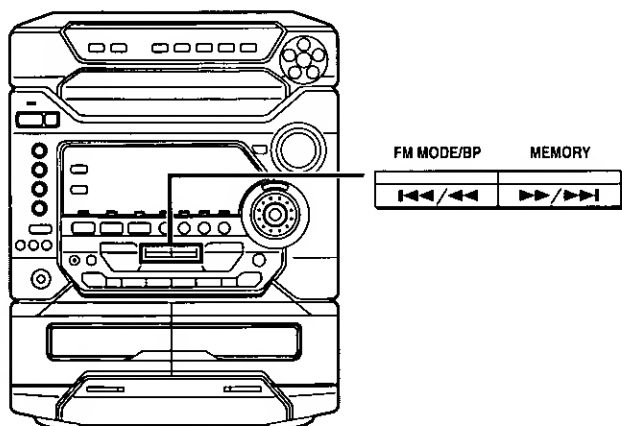
Note

Playback is interrupted while playing back tapes if you open the other deck.

Reference

After you have turned a surround system on when listening to another source, the surround system is automatically turned off when TAPE is selected as the source and the unit switches to two channel stereo mode.

A



Listening to tapes

To fast-forward or rewind the tape

Press [**⏮**/**⏪**] or [**⏭**/**⏩**] in the stop mode.

Tape direction	To rewind	To fast-forward
"▶"	[⏮ / ⏪]	[⏭ / ⏩]
"◀"	[⏭ / ⏩]	[⏮ / ⏪]

To find the beginning of a program (TPS: Tape Program Sensor)

Press [**⏮**/**⏪**] or [**⏭**/**⏩**] during play.

Tape direction	To play the current tune from the beginning	To play the next tune from the beginning
"▶"	[⏮ / ⏪]	[⏭ / ⏩]
"◀"	[⏭ / ⏩]	[⏮ / ⏪]

Note

The TPS function searches for silent parts of about 4 seconds in length which are normally found between tunes. As a result, it may not function properly in the following cases:

- With short silent parts
- When noise occurs between tunes
- With silent parts found within tunes

Only for Asia and China

About the Dolby noise-reduction system

The Dolby noise-reduction system is designed to effectively reduce the annoying high-frequency "hissing" noise typical of cassette tapes.

During recording, the system functions to increase the high-frequency sound level, and then, during playback, that same portion is weakened to bring it back to the previous level.

The DOLBY NR effect is obtained by selecting the same type of Dolby during playback as was used during recording.

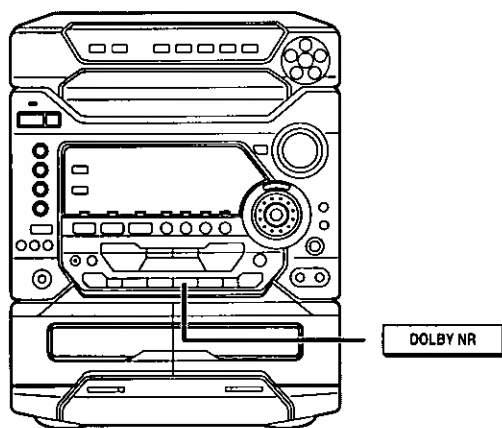
This unit includes the Dolby B NR-type.

Dolby B NR-type

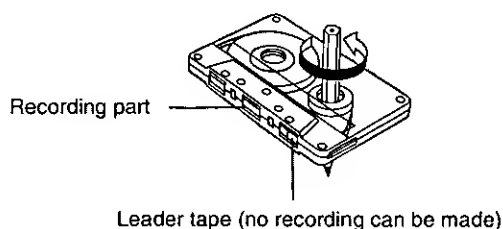
Noise is reduced to about one-third.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

B



A



Before recording (Deck 2 only)

Types of tapes which can record correctly

The unit automatically identifies the type of tape.

NORMAL POSITION/TYPE I	○
HIGH POSITION/TYPE II	○
METAL POSITION/TYPE IV	×

This system cannot make a recording, or erase correctly, if metal position tapes are used.

To record from the beginning of the tape **A**

You cannot record on the leader part of the tape. Before recording, wind the tape past the leader to a point where recording can start immediately.

To start recording from a particular position on the tape

Wind the tape on to the position you want recording to start from.

To start recording from the reverse side **B**

Insert the cassette into deck 2 and follow these steps to change the side.

- Press [TAPE DECK1/2] so the deck 2 indicator lights.
- Press [◀] then [■]. Tape direction will be shown as "◀".

How volume, sound quality/surround effect recording

The tape you are recording is not affected whatsoever by changes in volume, sound quality, surround effect and surround system. In recording, sound quality, surround effect and surround system are set automatically to "FLAT".

To erase a recorded sound **C**

- (Only for Asia and China) Disconnect the microphone(s).
- Press [TAPE DECK1/2].
- Insert the recorded tape into deck 2.
- (Only for Asia and China) Press [DOLBY NR] so that the Dolby NR indicator goes out.
- Press [REV MODE] to select reverse mode.
- Press [● REC/STOP].

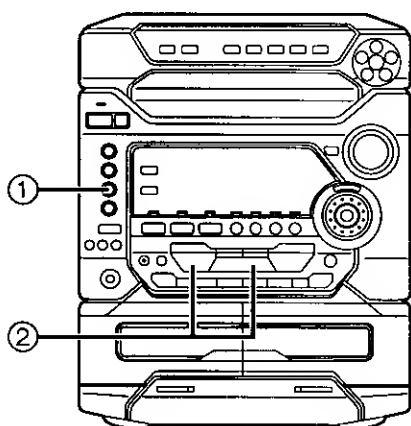
Note

- You cannot open deck 1 while recording.
- You cannot fast-forward or rewind one deck while recording with the other.

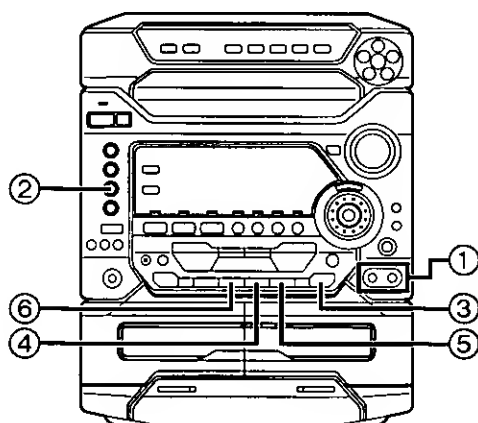
For your reference

During recording, sources recorded with Dolby Digital (5.1 ch) are automatically down mixed and recorded as two channels onto the cassette.

B



C



Recording from radio broadcasts

Preparation

Insert the tape to be recorded on into deck 2.

Tape direction is automatically set to "►".

Change the tape direction if you want to start recording from the reverse side. (→ page 32)

For your reference

Frequency displays are different according to the area.


1 Select a radio station.

(→ page 15, steps 1-3)

2 Only for Asia and China

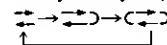
Press [DOLBY NR].


You have to turn DOLBY NR ON/OFF according to the type of recording you made.


Every time you press the button;  NR→off

3 Press [REV MODE] to select the reverse mode.



Every time you press the button;



: One side is recorded, then recording stops automatically.

: Both sides (front side→reverse side) are recorded, then recording stops automatically.

4 Press [● REC/STOP] to start recording.

If you selected  in step 3, the direction will automatically change to  when recording starts.

To stop recording

Press [● REC/STOP].

To cut an unnecessary part while recording

1. Press [● REC/STOP] during the unnecessary part. The cassette deck will stop.
2. Press [● REC/STOP] to resume recording again. Recording will continue in the same direction as before.

Note

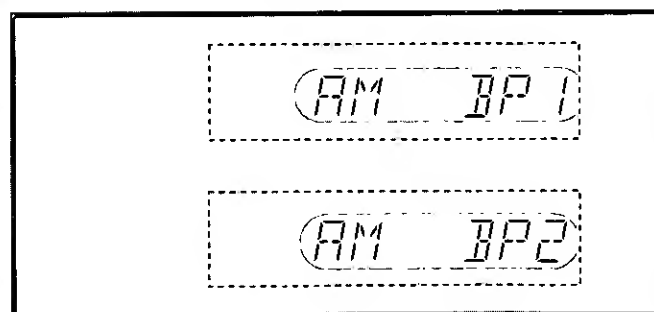
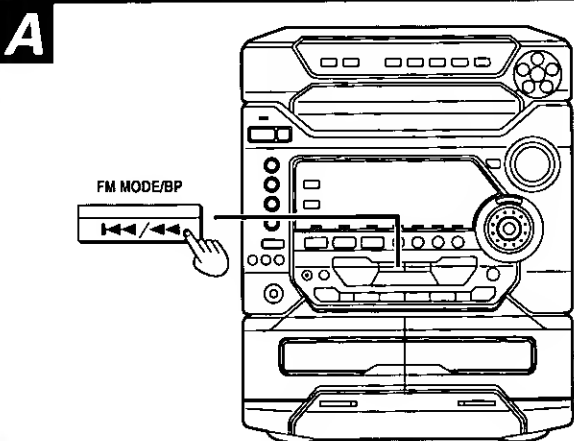
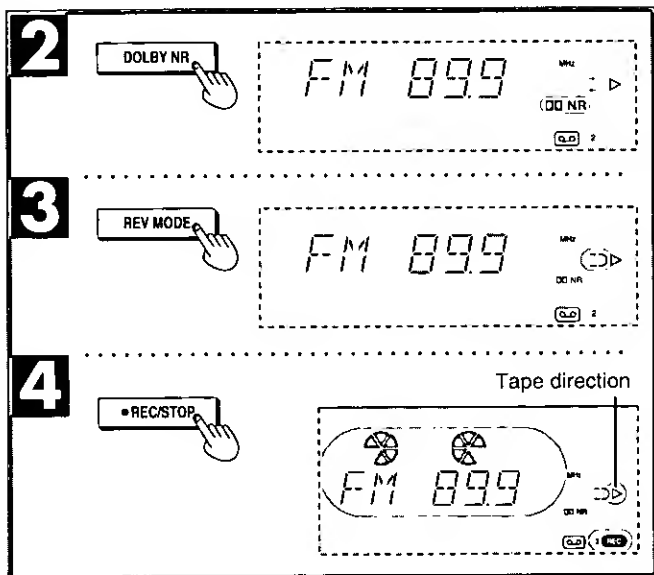
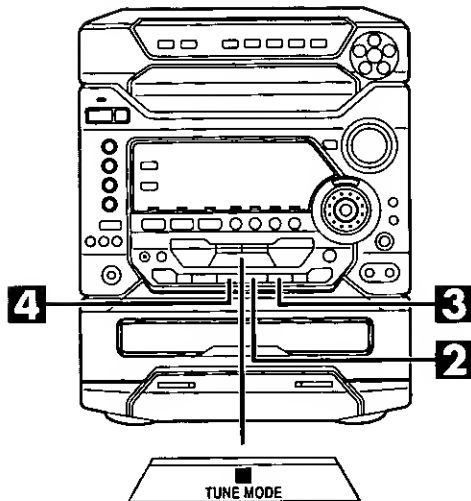
When recording an AM broadcast, volume is momentarily interrupted when you start and stop the recording.

To reduce noise while AM recording (Beat proof function)

Press [I◀▶/▶▶, FM MODE/BP] while recording.

Each time you press the button, BP 1 and BP 2 will be displayed alternately.

Select the position where there is less noise.



Recording from discs

Normal recording

DVD [V-CD] CD

Preparation:

Insert the tape to be recorded on into deck 2.

Tape direction is automatically set to "►".

Change the tape direction if you want to start recording from the reverse side. (→ page 32)

1 Only for Asia and China

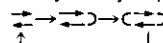
Press [DOLBY NR].

You have to turn DOLBY NR ON/OFF according to the type of recording you made.

Every time you press the button; NR → off

2 Press [REV MODE] to select the reverse mode.

Every time you press the button;



One side is recorded, then recording stops automatically.

Both sides (front side → reverse side) are recorded, then recording stops automatically.

3 Insert discs in the trays. (→ page 16)

When discs are loaded

Press [DISC1]–[DISC5] to select the disc to record, then press [■] to stop the disc.

4 DVD and V-CD

Press [▶] to start play.

5 At the point you want to start recording:

Press [● REC/STOP] to start recording.

If you selected in step 2, the direction will automatically change to when recording starts.

4 CD only

Press [● REC/STOP] to start recording.

• The CD will automatically start.

• If you selected in step 2, the direction automatically changes to when recording starts.

To stop recording

• DVD and V-CD

Press [● REC/STOP].

The disc will keep playing.

• CD only

• Press [● REC/STOP].

The CD will automatically stop too.

• Press [■].

The tape will have a 4 second silent interval, the CD will automatically stop too.

To record programmed tracks

[V-CD] CD

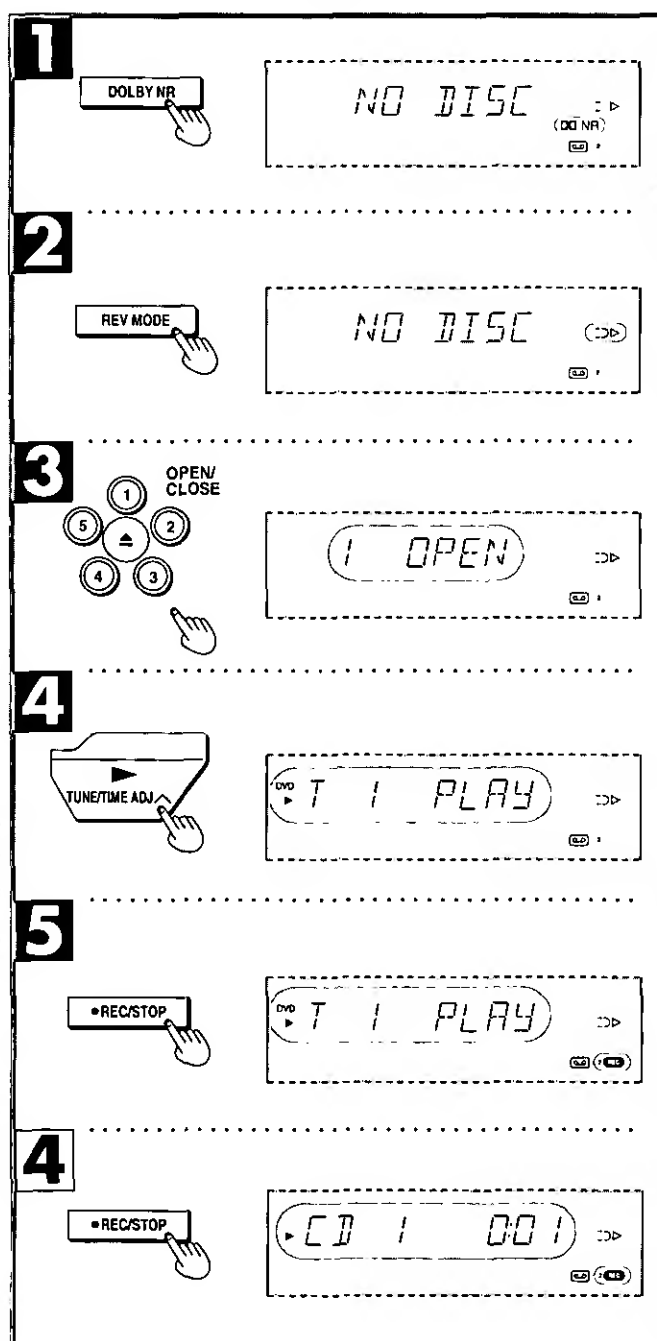
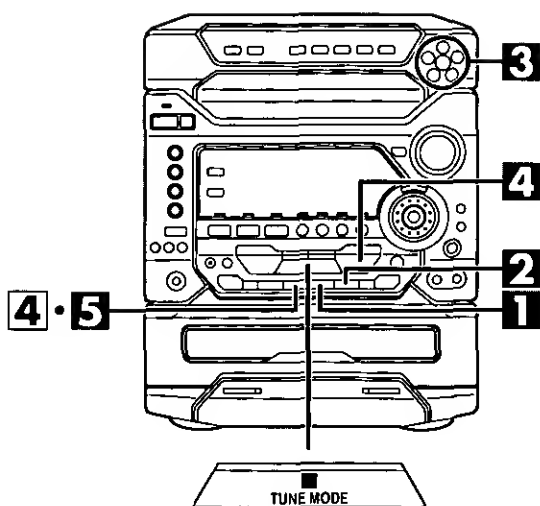
1. Perform steps 1–3 above, and then press [DVD/CD] on the remote control.

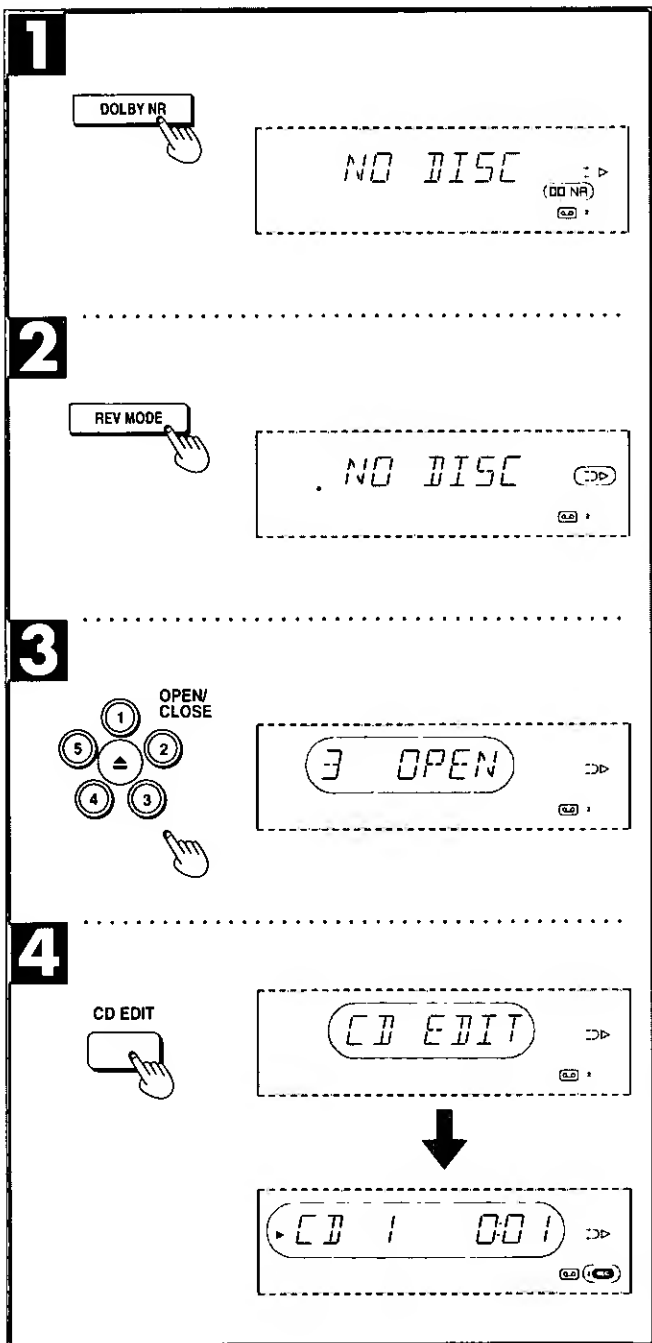
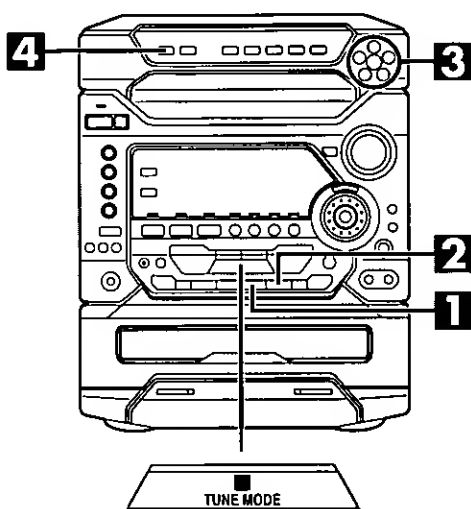
2. Press [PLAY MODE] to select "PRGM".

3. Press [◀], [▶], [▼], [▲] to select the track, and then [SELECT] on the remote control. (Program the desired tracks.)

4. Press [▶] to start play.

5. Press [● REC/STOP] to start recording.





Recording from discs

One-touch editing

CD

This function makes it easier for you to record from audio CDs.

- When recording, if a track is cut off in the middle at the end of the front side, it is recorded from the beginning on the reverse side.
- At the end of the reverse side recording stops and the current track will be interrupted.

Preparation:

Insert the tape to be recorded on into deck 2.

Tape direction is automatically set to "►".

Change the tape direction if you want to start recording from the reverse side. (→ page 32)

1

Only for Asia and China

Press [DOLBY NR].

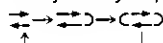
You have to turn DOLBY NR ON/OFF according to the type of recording you made.

Every time you press the button; NR → off

2

Press [REV MODE] to select the reverse mode.

Every time you press the button;



: One side is recorded, then recording stops automatically.

: Both sides (front side → reverse side) are recorded, then recording stops automatically.

3

Insert audio CDs in the trays. (→ page 16)

When discs are loaded

Press [DISC1]–[DISC5] to select the disc to record, then press to stop the disc.

4

Press [CD EDIT].

If you select in step 2, the direction automatically changes to when recording starts.

To stop recording

Press [REC/STOP].

"EDIT OUT" will appear on the display, the CD will automatically stop too.

To edit-record programmed tracks

CD

1. Perform steps 1–3 above, and then press [DVD/CD] on the remote control.
2. Press [PLAY MODE] to select "PRGM".
3. Press [], [], [], [] to select the track, and then [SELECT] on the remote control. (Program the desired tracks.)
4. Press [CD EDIT] to start recording.

When "ERROR" appears on the display

See if the disc manager function is set to "ALL DISC" or "ALL DISC REPEAT". CD edit only functions in the "1-DISC" mode.

Tape-to-tape recording

For U.S.A. and Canada

The recording level will be recorded as they are on the tape being played back.

For others

The recording level and the Dolby effect will be recorded as they are on the tape being played back.

Preparation:

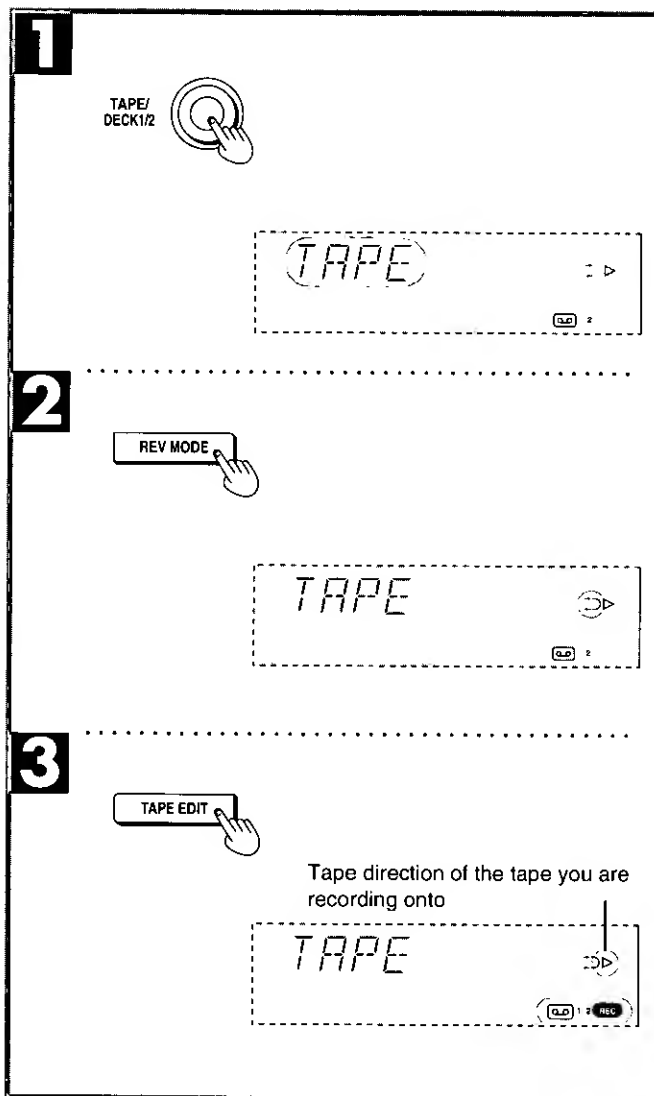
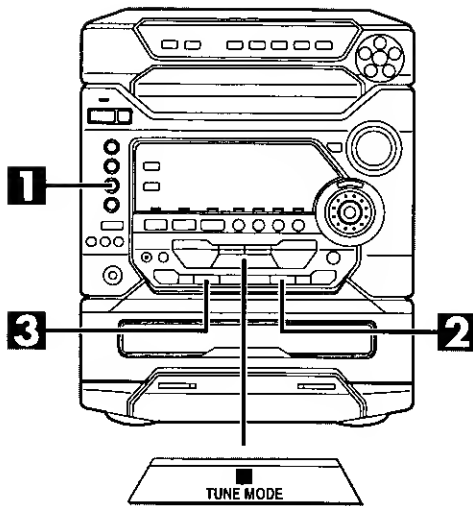
Insert the cassettes.

For playback: into deck 1

For recording: into deck 2

Tape direction is automatically set to "►".

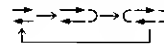
Change the tape direction if you want to start recording from the reverse side. (→ page 32)



1 Press [TAPE DECK1/2].

2 Press [REV MODE] to select the reverse mode.

Every time you press the button;



→: One side is recorded, then recording stops automatically.

↔, ↔→: Both sides (front side→reverse side) are recorded, then recording stops automatically.

3 Press [TAPE EDIT] to start recording.

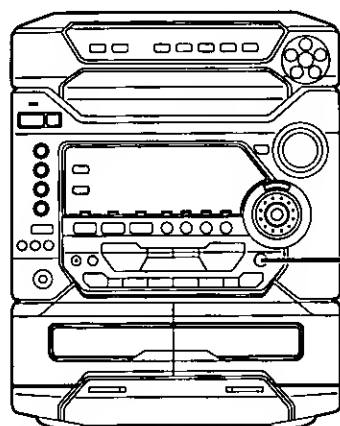
If you selected ↔→ in step 2, the direction will automatically change to → when recording starts.

To stop recording:

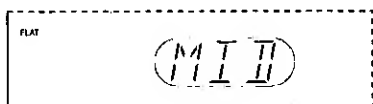
Press [■].

Both decks will stop.

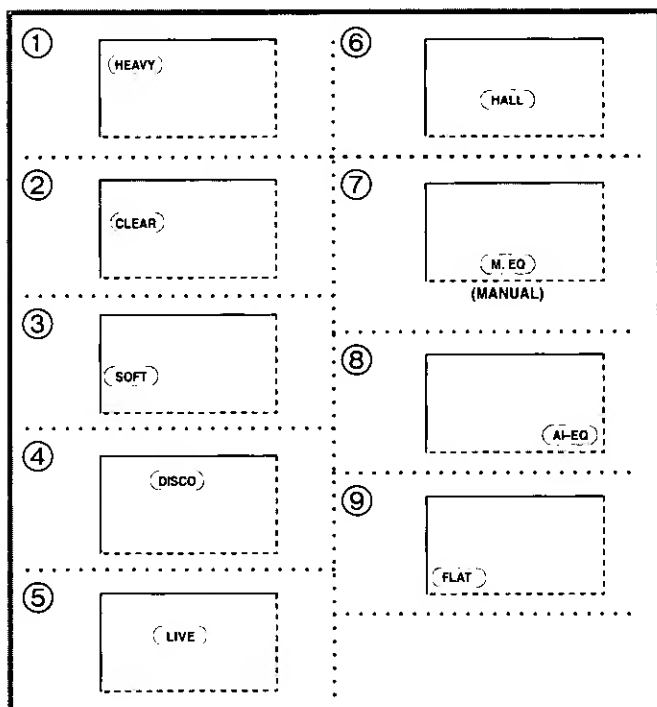
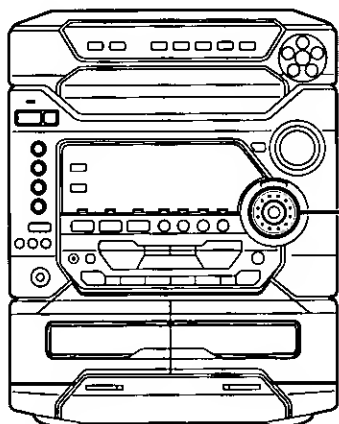
A



S.WOOFER



B



Boosting the super woofer **A**

Press [S.WOOFER].

[S.WOOFER] indicator lights.

- When listening to the sound through the speakers

MID (medium)→MAX (high)→off

- When listening to the sound through the headphones

Light on (on)→Light off (off)

To cancel

Press [S.WOOFER] to select "off".

Using the built-in sound quality/ sound field settings **B**

Turn [SOUND CONTROL JOG] to select the sound quality or sound field.

When it is turned clockwise, the settings are selected in the following sequence.

- ① **HEAVY (sound quality)**
Select this when playing rock or other kinds of music that sound better with an added punch.
- ② **CLEAR (sound quality)**
Select this for jazz or other kinds of music for which clarity in the treble range is desired.
- ③ **SOFT (sound quality)**
Select this when listening to background music.
- ④ **DISCO (sound field)**
Select this to produce sound with the same kind of lengthy reverberations heard at a disco.
- ⑤ **LIVE (sound field)**
Select this to make vocals more alive.
- ⑥ **HALL (sound field)**
Select this to add an expansiveness to the sound to produce the atmosphere of a great concert hall.
- ⑦ **MANUAL (= page 38)**
- ⑧ **AI EQ (= page 39)**
- ⑨ **FLAT**
The display before sound quality adjustments were started is restored after a moment.

To release the equalizer

Turn [SOUND CONTROL JOG] to select "FLAT".

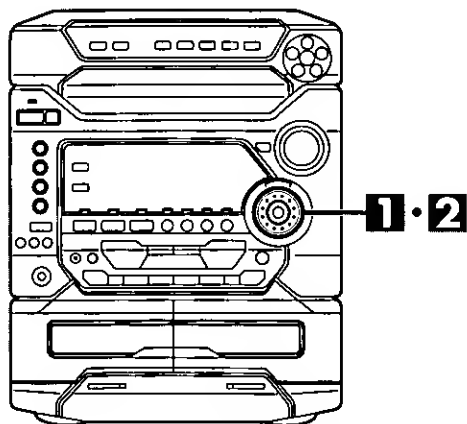
For selecting by the remote control

Press [EQ].

Each time this button is pressed, the setting is changed in the sequence described above.



Varying the sound quality with the manual equalizer (Manual EQ)



1 Turn [SOUND CONTROL JOG] to select "MANUAL".

When it is turned clockwise, the settings are selected in the following sequence.

- ① HEAVY
- ② CLEAR
- ③ SOFT
- ④ DISCO
- ⑤ LIVE
- ⑥ HALL
- ⑦ **MANUAL**
- ⑧ AI EQ
- ⑨ FLAT

2 Operate Joystick to adjust the sound quality.

- ① ← → direction: For selecting the range of the sound to be adjusted

Characteristics of each sound range

100 Hz: Super woofer range

Around 330 Hz: Bass to midrange

1 kHz: Midrange

Around 3.3 kHz: Midrange to treble

10 kHz: Treble

- ② ↓ ↑ direction: For adjusting the level

Repeat steps ① and ② to set the desired sound quality.

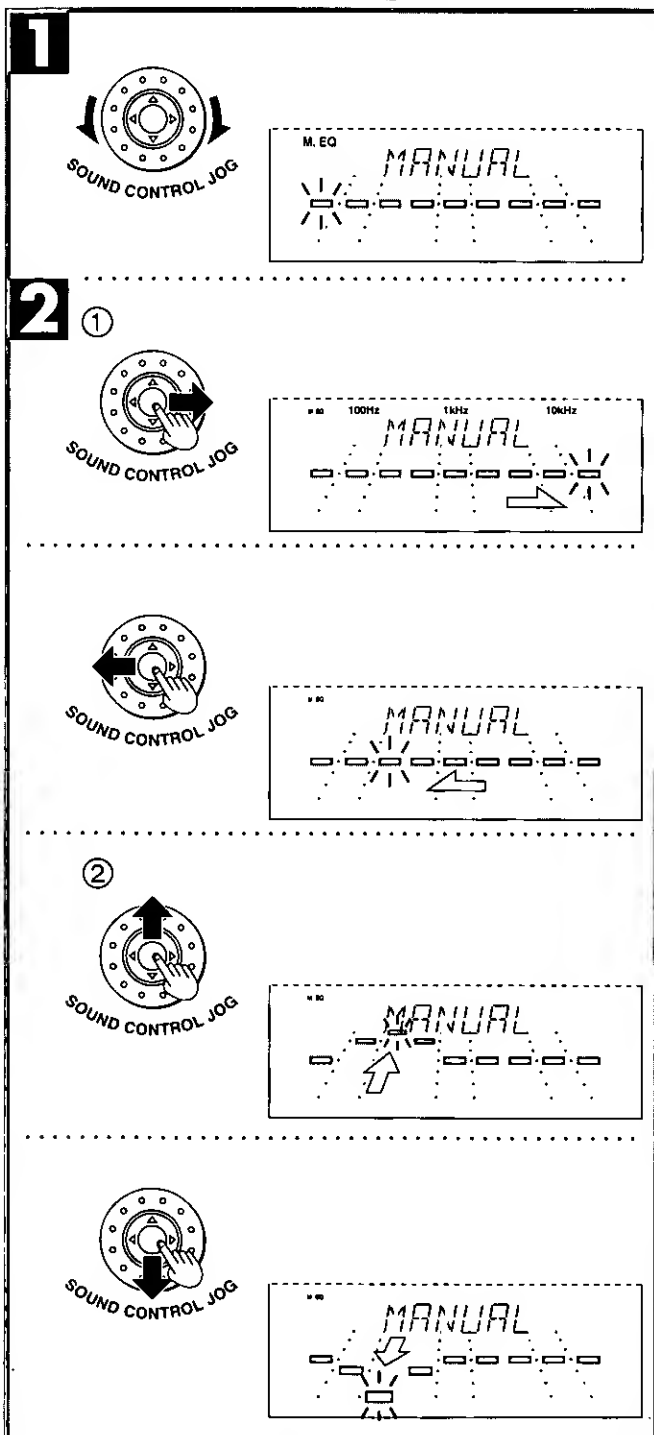
The display before sound quality adjustments were started is restored after a moment.

To release the equalizer

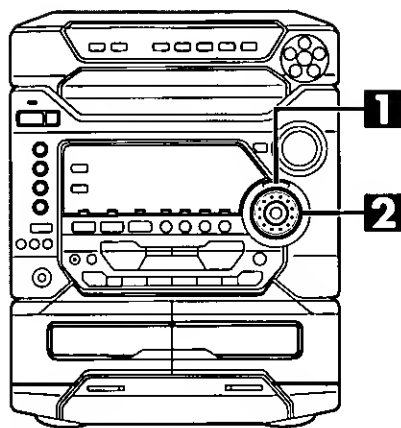
Turn [SOUND CONTROL JOG] to select "FLAT".

Note

- The sound quality setting is stored automatically. It is recalled when "MANUAL" is next selected.
- All recordings are performed at the flat setting even if an alternative sound quality setting has been selected.



Varying the sound quality with the acoustic image (AI) equalizer (3D AI EQ)



It is possible to use the acoustic image equalizer (AI EQ) together with the surround effect to create your own sound effect.

The AI EQ equalizer uses the SOFT, SHARP, HEAVY and LIGHT sound quality coordinates to achieve subtle sound quality settings with ease.

1 Press [3D AI EQ] to adjust the surround level.

Every time you press the button;

AI EQ → 3D AI1 → 3D AI2

2 Operate Joystick to adjust the sound quality.

① ←→ direction: SOFT–SHARP setting

② ↓ ↑ direction: LIGHT–HEAVY setting

Repeat steps ① and ② to set the desired sound quality.

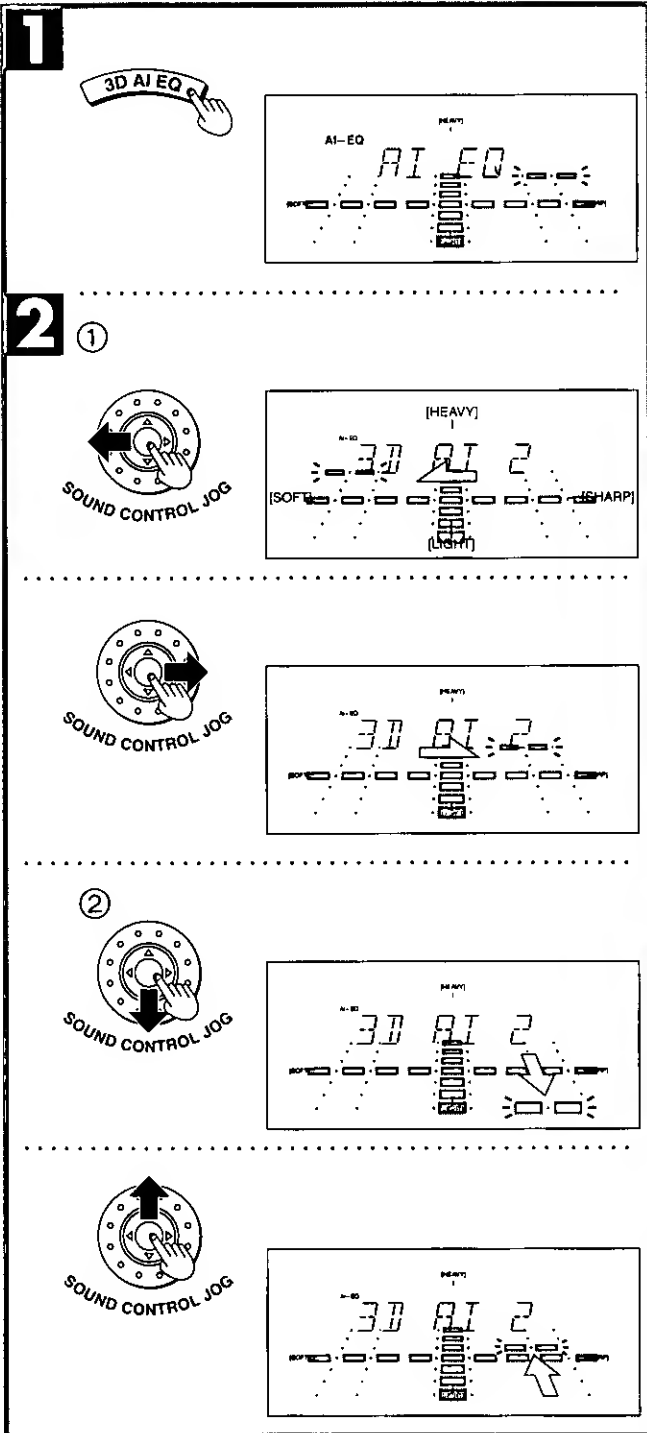
The display before sound quality adjustments were started is restored after a moment.

To release the equalizer

Turn [SOUND CONTROL JOG] to select "FLAT".

Note

- The sound quality setting is stored automatically. It is recalled when "AI EQ" is next selected.
- All recordings are performed at the flat setting even if an alternative sound quality setting has been selected.
- "3D AI 1" and "3D AI 2" cannot be selected when playing a source recorded with Dolby Digital, Dolby Pro Logic or when any surround effect is in use. (except for "MIX 2CH" mode)



Surround systems

- Select the surround mode appropriate to the source you are using. Read the following explanations to aid your selection.

Note

This system cannot play DTS discs.

This system doesn't have DTS decoder, so you cannot enjoy the disc encoded with DTS.

Surround system

Features

Recognizing the sound sources and software that can be used

DOLBY DIGITAL

- Dolby Digital is a discrete 6 (5.1) channel surround system developed for cinema use. The sound signals in Dolby Digital format are compressed to 1/10 their original size, allowing an entire movie to be recorded on a single DVD.
- This unit has built-in Dolby Digital circuitry so you can enjoy Dolby Digital Surround by connecting the speakers.
- Connect a subwoofer (not included) to the line out terminal on the rear panel of this system to increase the effect.

Discs with the following mark are recorded in Dolby Digital:

- DVD

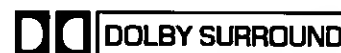


DOLBY PRO LOGIC

- This system was developed to get a better sense of presence from sources encoded with Dolby Surround.
- This unit has built-in Dolby Pro Logic circuitry so you can enjoy Dolby Surround by connecting the speakers.
- The feeling of position has been improved by the addition of a separate center speaker channel.

Software with the following mark is recorded in Dolby Pro Logic:

- Laser Disc
- DVD
- Video tape
- CD



This mode cannot be used with the radio.

SUPER SURROUND

MOVIE mode

MUSIC mode

- This mode adds surround effects to movie software that isn't recorded with the above systems. In MOVIE mode you can adjust the volume of the surround speakers.

- This mode adds surround effects to normal music sources.

- This mode adds stereo-like effects to monaural sound sources.

Any general sound source can be used.

- CD
- Tape
- Video tape

This mode cannot be used with the radio.

SIMULATED STEREO

Any general sound source recorded in monaural can be used.

- CD
- Tape
- Video tape

This mode cannot be used with the radio.

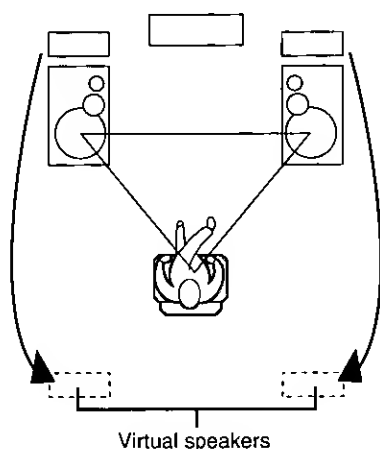
Add these audio effects to improve the experience

•Check the set-up of your speakers.

Set your speakers up to suit the surround mode you have selected to get the best surround effect.
These modes cannot be used with the radio.

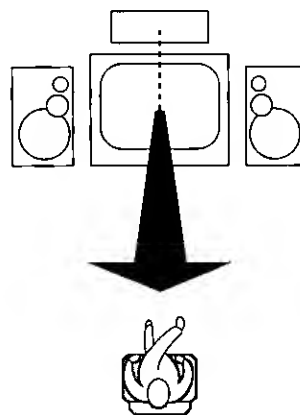
Virtual rear surround effect

- This mode is useful if you have to place your surround speakers on the front speakers because of the room's layout.
- This mode makes it seem like the sound from the surround speakers is coming from behind you.
- It is effective when using DOLBY DIGITAL, DOLBY PRO LOGIC, or SUPER SURROUND (MOVIE) mode.
(The "VIRTUAL REAR SURROUND" indicator turns green.)



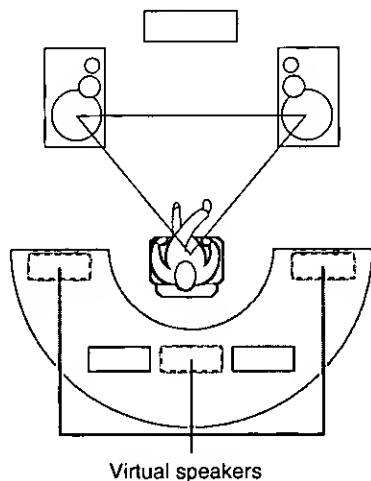
Center focus effect

- This mode makes it seem like the sound from the center speaker channel (dialogue, etc.) is coming from within the television.
- The center speaker must be placed on top of the television.
- It is effective when using DOLBY DIGITAL or DOLBY PRO LOGIC. (The "CENTER FOCUS" indicator turns green.)



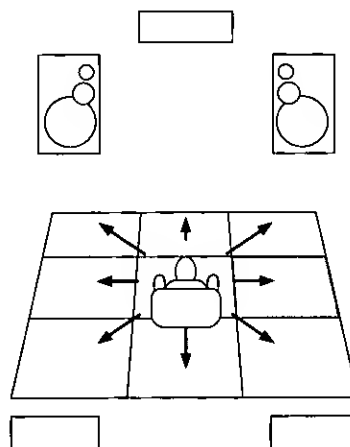
Multi rear surround effect

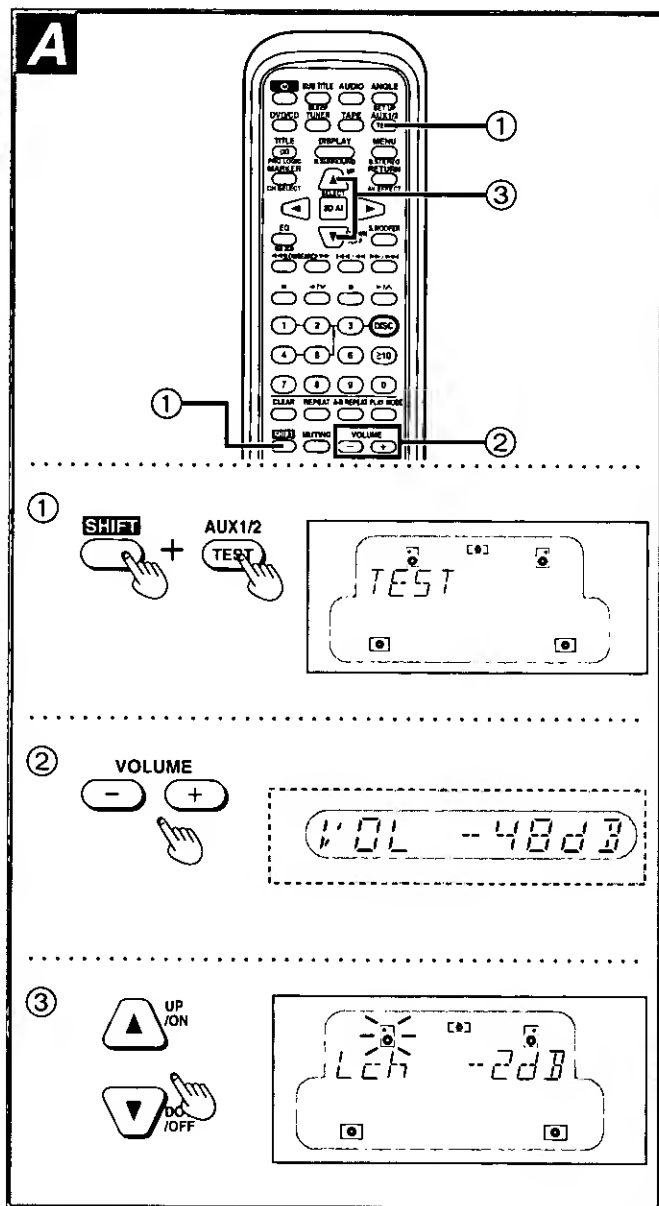
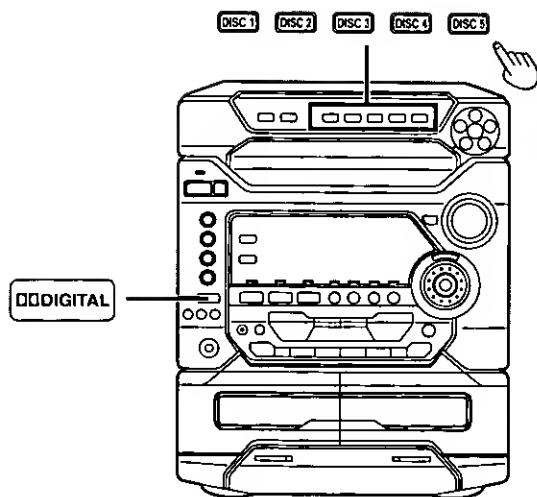
- Through processing of the surround sound signals, this mode makes it seem like there are multiple surround speakers in your room.
- This mode increases the cinema-like sense of presence.
- It is effective when using DOLBY DIGITAL, DOLBY PRO LOGIC, or SUPER SURROUND (MOVIE) mode.
(The "MULTI REAR SURROUND" indicator turns green.)



Seat position function

- This function helps maintain the sound signal position even if the listening position itself is changed.
- It is effective when using DOLBY DIGITAL, DOLBY PRO LOGIC, or SUPER SURROUND (MOVIE) mode.
(The "SEAT POSITION" indicator turns green.)





Enjoying sound with DOLBY DIGITAL

- Use this mode when playing sources recorded with Dolby Digital.
- There are no special steps required to playback Dolby Digital DVDs. This system automatically switches to 5.1ch (6ch) input when a 5.1ch (6ch) DVD is played.

Preparation:

If you have connected a subwoofer (not included), press and hold [S.WOOFER] for about 2 seconds so "SUB W ON" is shown on the display.

Playback the source (DVD).

DIGITAL indicator will light up.

To adjust the volume of each speaker

by remote control only

Sit in the normal listening position and make the adjustments with the remote control.

Preparation: Press [DVD/CD].

① Press [TEST] ([SHIFT]+[AUX1/2]).

A test signal is output.

The speaker outputting the test signal is displayed while the test is running.

L: Front speaker (Left)

C: Center speaker

R: Front speaker (Right)

RS: Surround speaker (Right)

LS: Surround speaker (Left)

② Press [VOLUME (- or +)].

Set the volume to the normal listening level.

③ Press [▲] or [▼].

Adjust the output level.

• Adjust the output level of the front left and right speakers.

• Adjust the output level of the center and surround speakers so they are the same apparent level as the front speakers.

▲: Increases the output level

▼: Decreases the output level

• Repeat step ③ to adjust the level accordingly.

• To select a specific channel to make volume adjustments, press [CH SELECT] ([SHIFT]+[MARKER]). Each time it is pressed, the display changes to show level adjustments for each speaker.

To stop the test signal

Press [TEST] ([SHIFT]+[AUX1/2]).

To adjust the volume of each speaker

You can change the output level of each speaker manually with the remote control.

While enjoying the desired source:

1. Press [CH SELECT] ([SHIFT]+[MARKER]) to select the speaker.

Each time the button is pressed:

L→C→R→RS→LS→SW

↑

2. Press [▲] or [▼] to adjust the output level.

Reference

• To down mix Dolby Digital (5.1 ch) signals to 2 channels, press [MIX 2CH] ([SHIFT]+[EQ]).

• Add audio effects to improve the surround effect.

Manufactured under license from Dolby Laboratories.

"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

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Enjoying a Dolby Surround source with Dolby Pro Logic

Use this mode when playing sources recorded with Dolby Pro Logic.

- 1 Press **[PRO LOGIC]**.
The **[PRO LOGIC]** lamp lights.

- 2 Playback a Dolby Surround source.

To turn off DOLBY PRO LOGIC

Press **[PRO LOGIC]**.

The **[PRO LOGIC]** lamp goes out.

To adjust the volume of each speaker

by remote control only

Sit in the normal listening position and make the adjustments with the remote control.

Preparations:

Press **[PRO LOGIC]** (**[SHIFT]**+**[TITLE]**).

The **[PRO LOGIC]** lamp lights.

- 1 Press **[TEST]** (**[SHIFT]**+**[AUX1/2]**).

A test signal is output.

The speaker outputting the test signal is displayed while the test is running.

L: Front speaker (Left)

C: Center speaker

R: Front speaker (Right)

S: Surround speakers

- 2 Press **[VOLUME (- or +)]**.

Set the volume to the normal listening level.

- 3 Press **[▲]** or **[▼]**.

Adjust the output level.

Adjust the output level of the center and surround speakers so they are the same apparent level as the front speakers.

▲: Increases the output level

▼: Decreases the output level

• Repeat step ③ to adjust the level accordingly.

• To select a specific channel to make volume adjustments, press **[CH SELECT]** (**[SHIFT]**+**[MARKER]**). Each time it is pressed, the display changes to show level adjustments for the center speaker and surround speakers.

To stop the test signal

Press **[TEST]** (**[SHIFT]**+**[AUX1/2]**).

To adjust the volume of center and surround speakers

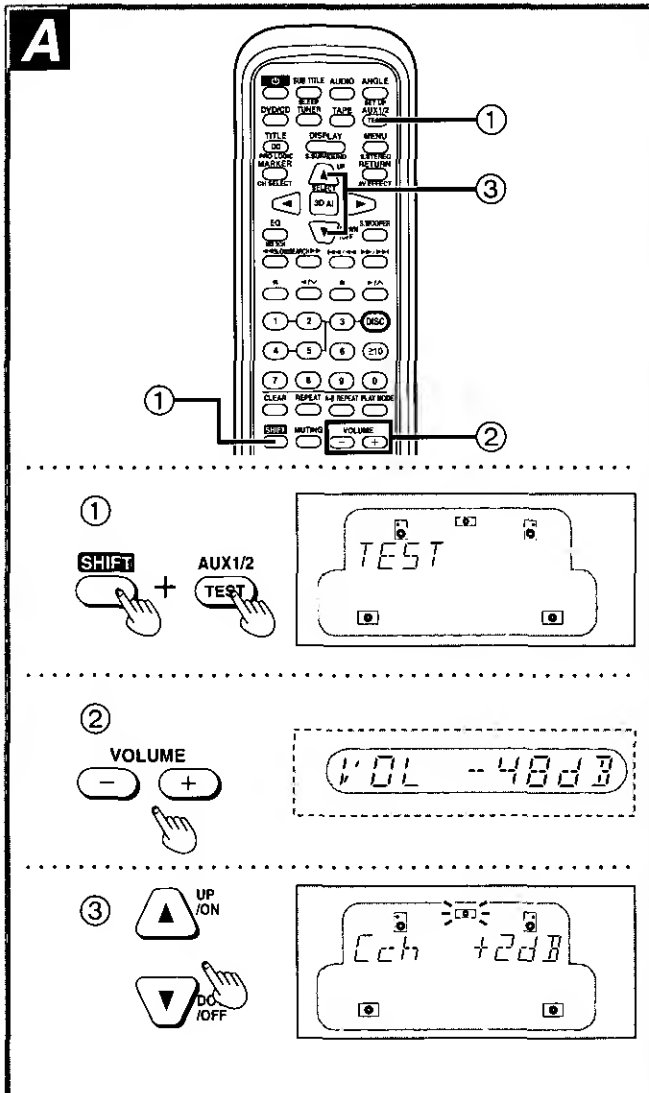
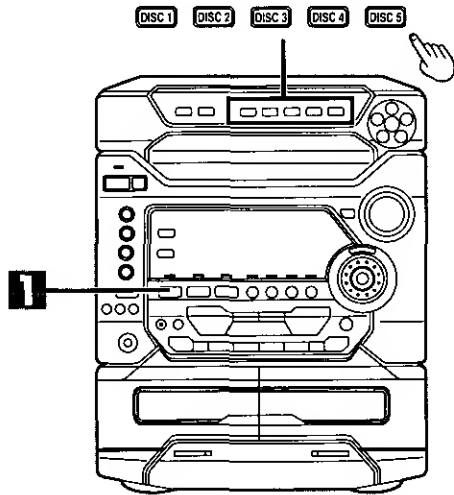
You can change the output level of each speaker manually with the remote control.

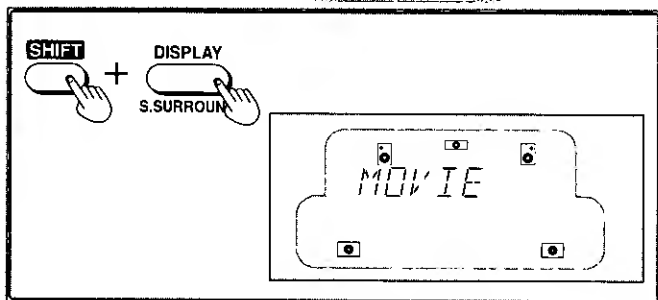
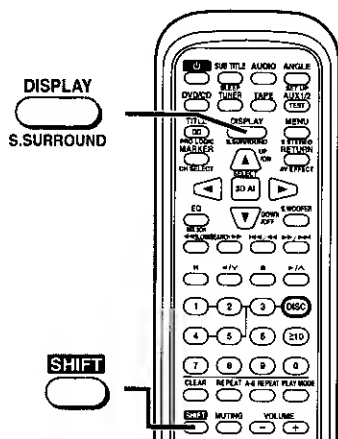
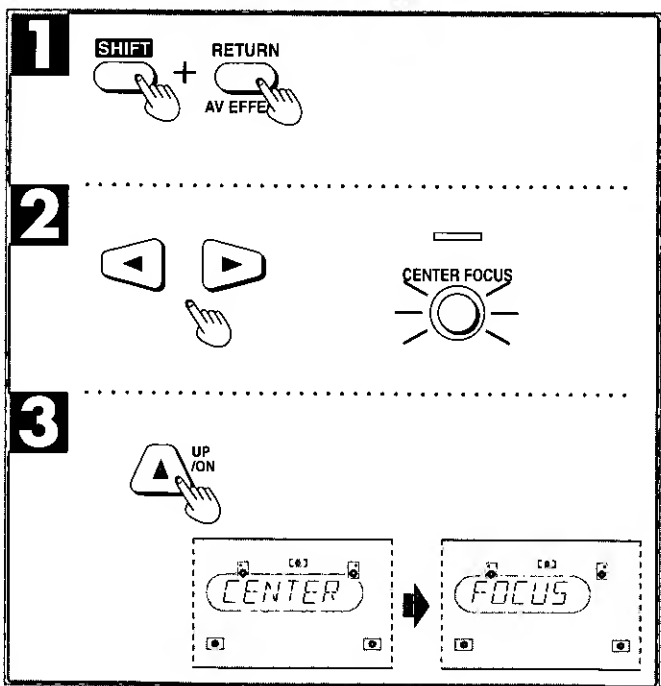
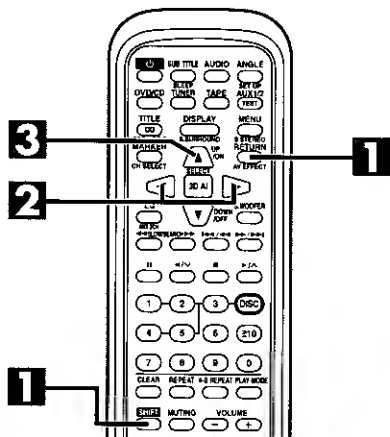
While enjoying the desired source:

1. Press **[CH SELECT]** (**[SHIFT]**+**[MARKER]**) to select the speaker.
Each time the button is pressed:
C ↔ S
2. Press **[▲]** or **[▼]** to adjust the output level.

Reference

Add audio effects to improve the surround effect.



A**B**

Enjoying sound with stereophonics (SUPER SURROUND)

A

- This mode adds 5 channel surround effects to normal stereo sources.
- SUPER SURROUND is only effective if speakers are used. No discernable effect will be heard through headphones.

From the remote control

Press [S.SURROUND] ([SHIFT]+[DISPLAY]) and select MOVIE mode or MUSIC mode.

Each time the buttons are pressed;
MUSIC→MOVIE→NORMAL STEREO (off)

To cancel

Press [S.SURROUND] ([SHIFT]+[DISPLAY]) and select "NORMAL STEREO".

From the main unit

Press [SUPER SURROUND] to select the desired mode.

To adjust the volume of surround speakers

You can change the output level of surround speakers manually with the remote control.

While enjoying the desired source;

1. Press [CH SELECT] ([SHIFT]+[MARKER]).
The output level of surround speakers is displayed.
2. Press [▼] or [▲].
Adjust the output level.
▲: Increase the output level
▼: Decrease the output level

Reference

Add audio effects to improve the surround effect. (► pages 45, 46)

Using the center focus effect (CENTER FOCUS) **B**

- When the center speaker is put on the TV set, this mode makes it seem like the sound from the center speaker is coming from within the TV screen.

- This mode can only be turned on or off if the [CENTER FOCUS] button is green. This mode cannot be used if the lamp is off.

From the remote control

- 1 Press [AV EFFECT] ([SHIFT]+[RETURN]).
- 2 Press [◀] or [▶] so the [CENTER FOCUS] button flashes.
- 3 Press [▲] (on).
The [CENTER FOCUS] lamp lights.

The [CENTER FOCUS] button will stop flashing in a while.

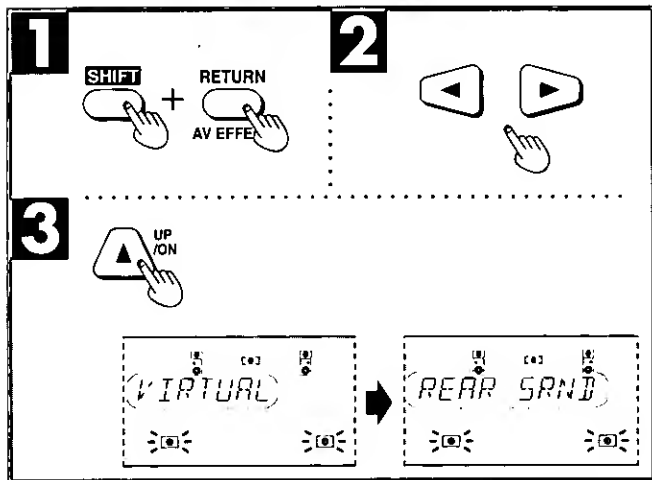
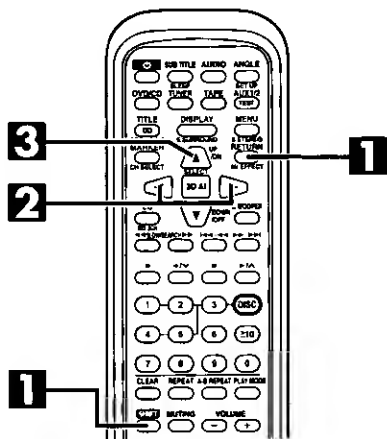
To cancel

After steps 1 and 2, press [▼] (off).

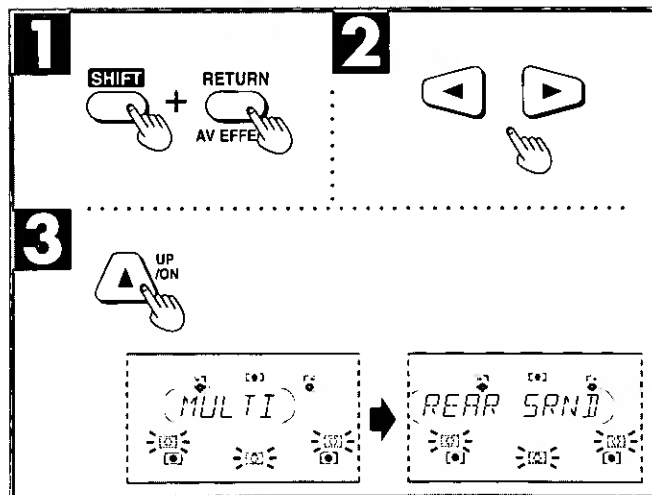
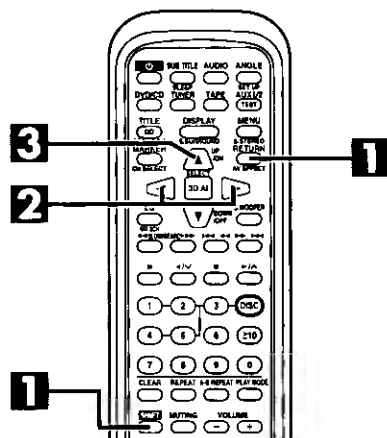
From the main unit

Press [CENTER FOCUS] to turn on/off.

A



B



Using the virtual rear surround effect (VIRTUAL REAR SRND)

- When the surround speakers are put on the front speakers, this mode makes it seem like the sound from the surround speakers is coming from behind you.
- This mode can only be turned on or off if the [VIRTUAL REAR SRND] button is green. This mode cannot be used if the lamp is off.

From the remote control

- 1 Press [AV EFFECT] ([SHIFT]+[RETURN]).
- 2 Press [◀] or [▶] so the [VIRTUAL REAR SRND] button flashes.
- 3 Press [▲] (on).
The [VIRTUAL REAR SRND] lamp lights.

The [VIRTUAL REAR SRND] button will stop flashing in a while.

To cancel

After steps 1 and 2, press [▼] (off).

From the main unit

Press [VIRTUAL REAR SRND] to turn on/off.

Using the multi rear surround effect (MULTI REAR SRND)

- This mode makes it seem like there are multiple surround speakers in your room.
- This mode can only be turned on or off if the [MULTI REAR SRND] button is green. This mode cannot be used if the lamp is off.

From the remote control

- 1 Press [AV EFFECT] ([SHIFT]+[RETURN]).
- 2 Press [◀] or [▶] so the [MULTI REAR SRND] button flashes.
- 3 Press [▲] (on).
The [MULTI REAR SRND] lamp lights.

The [MULTI REAR SRND] button will stop flashing in a while.

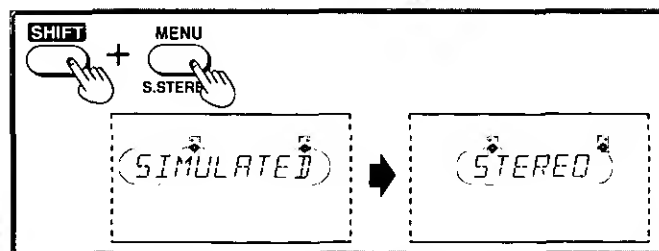
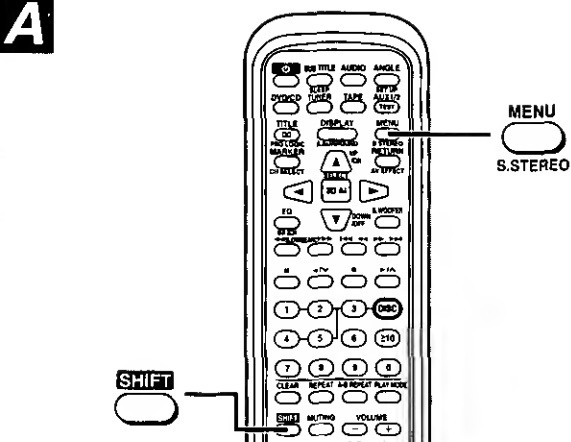
To cancel

After steps 1 and 2, press [▼] (off).

From the main unit

Press [MULTI REAR SRND] to turn on/off.

A



Enjoying sound with simulated stereo (SIMULATED STEREO)

This mode adds stereo effect to monaural sources.

From the remote control

Press [S.STEREO] ([SHIFT]+[MENU]).

The [SIMULATED STEREO] lamp lights.

To cancel

Press [S.STEREO] ([SHIFT]+[MENU]) again.

The [SIMULATED STEREO] lamp goes out.

From the main unit

Press [SIMULATED STEREO] to turn on/off.

Using the seat position function (SEAT POSITION)

- This function lets you adjust the listening position for better effect.
- This mode can only be turned on or off if the [SEAT POSITION] button is green. This mode cannot be used if the lamp is off.

From the remote control

1 Press [AV EFFECT] ([SHIFT]+[RETURN]).

2 Press [◀] or [▶] so the [SEAT POSITION] button flashes.

3 Press [▲] (on).
The [SEAT POSITION] lamp lights.

4 Press [◀], [▶], [▼], [▲] to adjust the seat position.

The [SEAT POSITION] button will stop flashing in a while.

To cancel

After steps **1** and **2**, press [▼] (off).

From the main unit

1. Press [SEAT POSITION].

The [SEAT POSITION] lamp lights.

While the lamp is flashing change the seat position.

2. Within 10 seconds, operate Joystick to adjust the seat position.

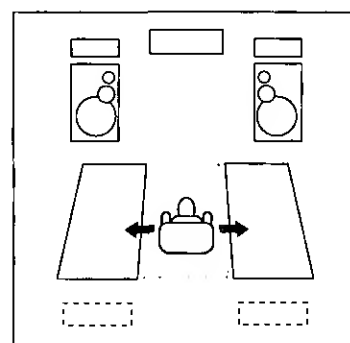
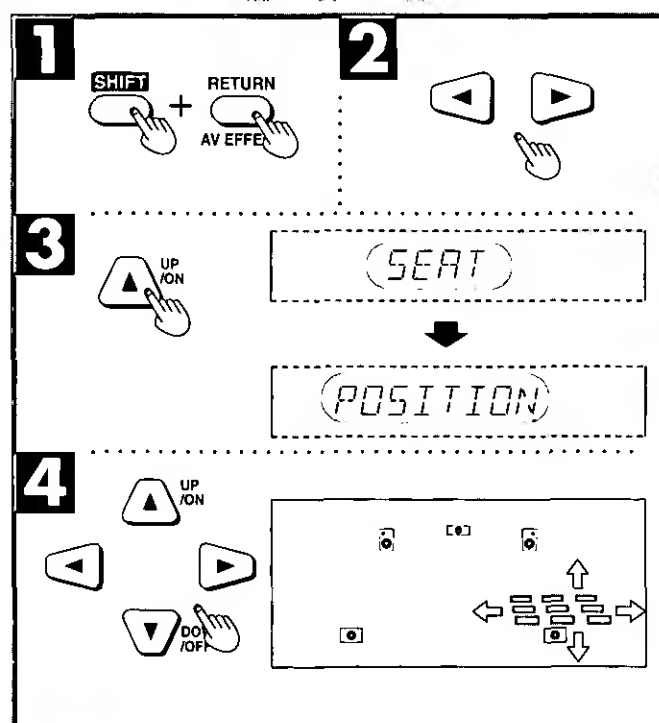
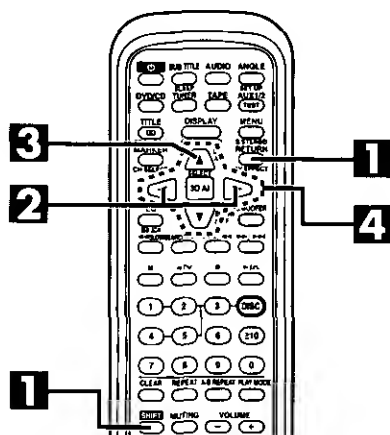
To cancel from the main unit

Press [SEAT POSITION] once to select the function and once again to turn it off.

Note

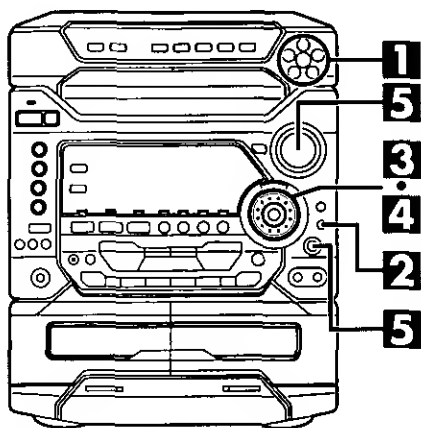
When used with virtual rear surround, seat position is changed in 3 horizontal steps.

B



Enjoying KARAOKE with DVDs, Video CDs and CDs

Only for Asia and China



Preparation

- ① Switch the TV on and select "Video" as the TV input.
- ② Lower volume with [MIC VOL], then connect the microphone(s) to the MIXING MIC jack. (Plug type: 3.5 mm monaural)

1 Insert a disc in the tray, then start playing the disc. (= page 16)

- When Automatic Play function will be activated, play begins.
- When discs are loaded
Press [DISC1]–[DISC5] to select the disc for Karaoke.

2 Press [KARAOKE] during play. Karaoke screen displays on the TV.

3 Operate Joystick ([◀] or [▶]) to select the Karaoke mode.

When you use DVD karaoke disc (solo or duet) or multiplex disc (video CD/CD):
Select the vocal select mode. (①)

When you use a normal disc (non-Karaoke):
Select the voice mute mode. (②)

4 Operate Joystick ([▼] or [▲]) to select the desired mode.

- Vocal select;
DVD Karaoke disc (solo)
---: off
ON: on
DVD Karaoke disc (duet)
---: off
1+2: Vocals 1 and 2
V1: Vocal 1 only
V2: Vocal 2 only
- Multiplex disc (video CD/CD)
LR: Left and Right channel sound from Each speaker
L: Only Left channel sound
R: Only Right channel sound
- Voice mute;
[Speaker icon] : off
[Speaker icon] : on

5 ① Adjust volume with [VOLUME] and [MIC VOL]. ② Sing along.

To cancel the Karaoke

Operate the above procedures to select "OFF".

With the remote control

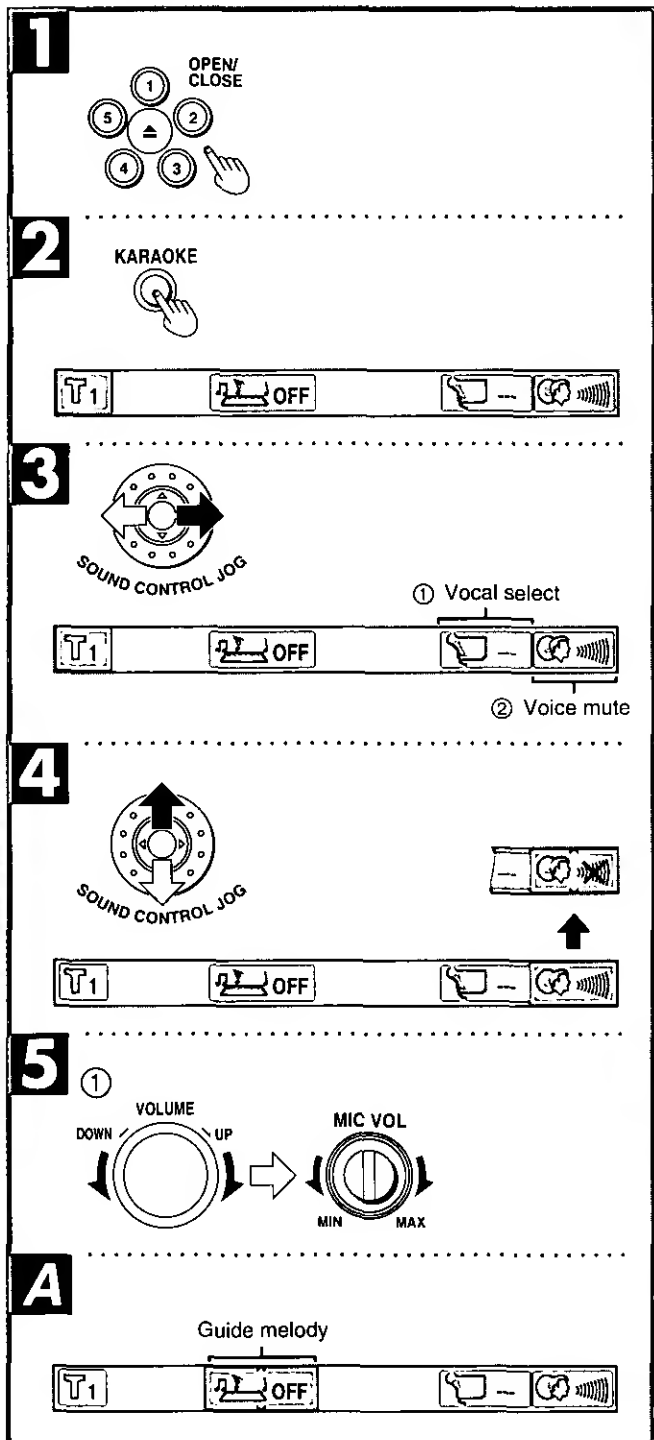
1. Press [KARAOKE] ([SHIFT]+[AUDIO]).
2. Press [◀] or [▶] to select the Karaoke mode.
3. Press [▼] or [▲] to select the desired mode.

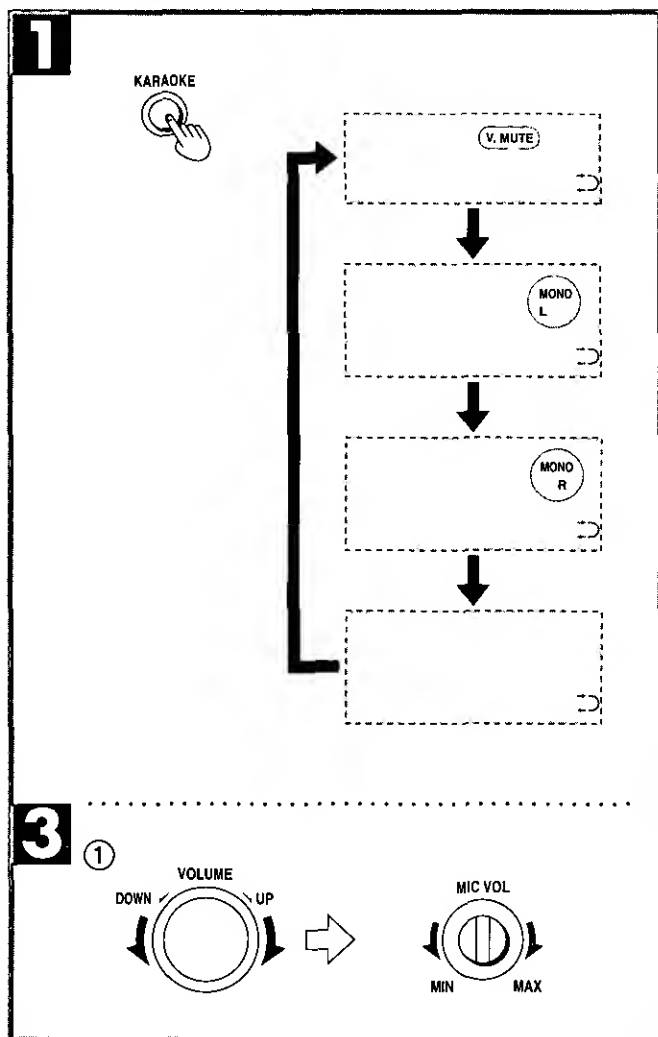
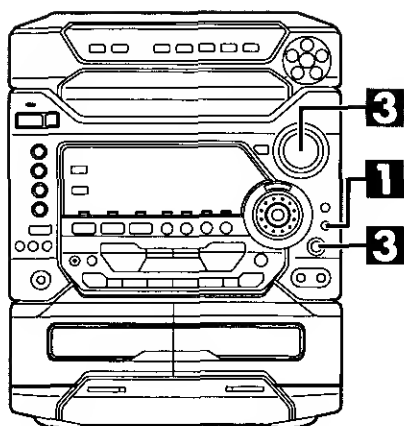
Using the guide melody function

Some DVD Karaoke disc only

When singing a song you don't know well use this function to raise the volume of the melody.

1. After steps 1 and 2, operate Joystick ([◀] or [▶]) to select guide melody mode. 4
2. Operate Joystick ([▼] or [▲]) to select the desired mode.
1: Normal volume
2: Louder volume
OFF: off





Enjoying KARAOKE with tapes and external sources

Only for Asia and China

Karaoke function cannot be done to the radio source.

Preparation:

Lower volume with [MIC VOL], then connect the microphone(s) to the MIXING MIC jack. (Plug type: 3.5 mm monaural)

1 Press [KARAOKE] to select the Karaoke mode.

Every time you press the button;
V•MUTE→MONO L→MONO R
↑ off

○: Appropriate ●: For practice, etc.

Software Voice modes	KARAOKE		Non-KARAOKE
	Sound multiplex	Stereo	
(OFF)	● (Background music & Voice)	○	● (For singing along)
V•MUTE	—	—	○
MONO L	○ (Background music)	—	—
MONO R	● (Voice)	—	—

Note

A bar is indicated in the above table when the voice mode is least effective. It is better to avoid using the mode in such cases.

2 Start the source (Tape, etc.).

- 3 ① Adjust volume with [VOLUME] and [MIC VOL].
② Sing along.

To cancel the Karaoke mode

Press [KARAOKE] to select "off" mode.

To select the Karaoke mode with the remote control

Press [KARAOKE] ([SHIFT]+[AUDIO]).

Each time the button is pressed, the mode changes.

V.MUTE function

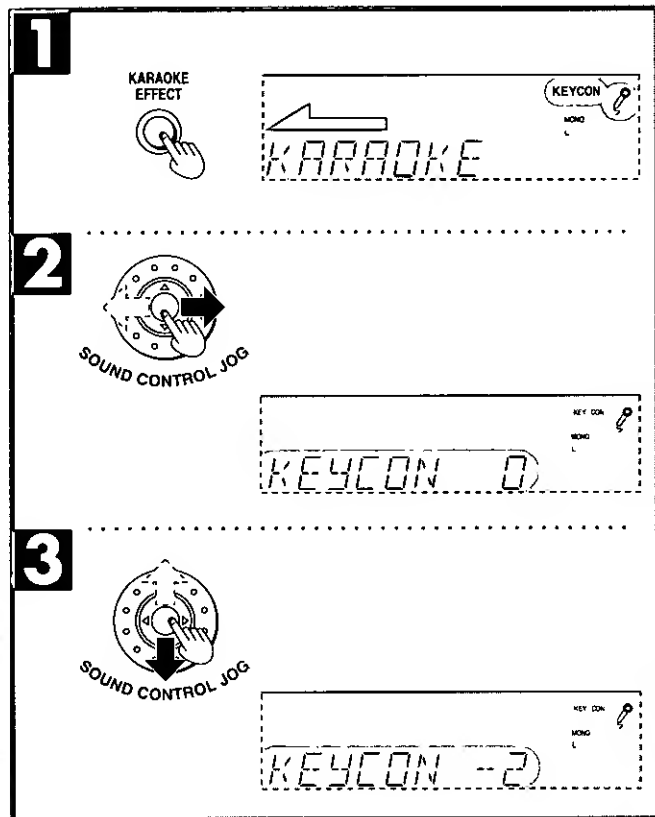
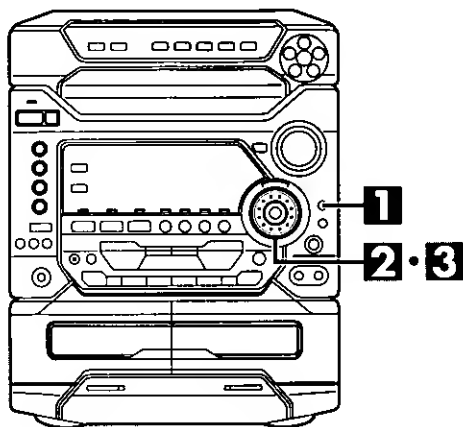
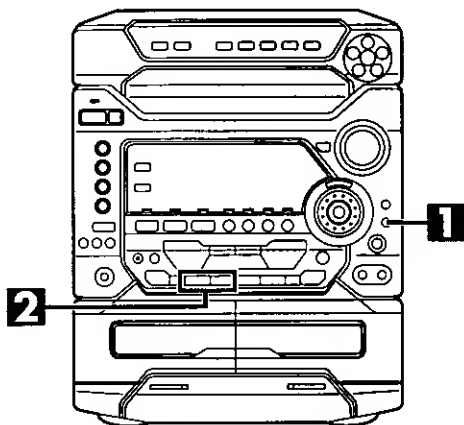
The voice portion of the track is blocked out but not the background music.

You need software recorded in stereo sound if you want to use the voice mute function. Voice and/or static may be reproduced with the following types of software.

- Software recorded in monaural
- Classical music, or works performed by a limited number of instruments
- Chorus works or duets

Note

- If a strange noise (squealing or howling) is emitted during use, move the microphone away from the speakers, or turn down the microphone volume.
- When you are not using the microphone, disconnect it from the MIXING MIC jack, and turn down the microphone volume level to MIN.

A**B****KARAOKE possibilities**

Only for Asia and China

Adding effects to your karaoke (KARAOKE EFFECT)

- 1** Press [KARAOKE EFFECT].
- 2** Operate Joystick ([◀] or [▶]) to select the Karaoke effect mode.

KEYCON ↔ ECHO ↔ CHORUS ↔ LOUNGE

KEYCON: To change the key

ECHO: To adjust the reverberation sound

CHORUS: To add voices staggered slightly from the singer, giving the effect of singing in a chorus

LOUNGE: To output voices from all speakers, giving the effect of singing at a karaoke bar

- 3** Operate Joystick ([▼] or [▲]) to select the level of effect.

KEYCON: -3 ↔ -2 ↔ -1 ↔ 0 ↔ +1 ↔ +2 ↔ +3

ECHO: 1 ↔ 2 ↔ 3 ↔ OFF

CHORUS: 1 ↔ 2 ↔ OFF

LOUNGE: 1 ↔ 2 ↔ 3 ↔ OFF

To cancel the KARAOKE effect mode

Press [KARAOKE EFFECT].

The current mode is displayed. Press again to cancel the mode.

With the remote control

1. Press [KARAOKE EFFECT] ([SHIFT]+[S.WOOFER]).
2. Press [◀] or [▶] to select the Karaoke effect mode.
3. Press [▼] or [▲] to select the level of effect.

Reference

Karaoke effect cannot be done to the radio source.

To record your "KARAOKE" performance**Preparation**

- ① Lower volume with [MIC VOL], then connect the microphone(s) to the MIXING MIC jack.
- ② Insert the tape into deck2, then select the reverse mode.

- 1** Select the Karaoke mode. (→ pages 47, 48)

- 2** Start recording and Karaoke performance.

•When singing off discs

Press [● REC/STOP] and start Karaoke performance.

•When singing off tapes

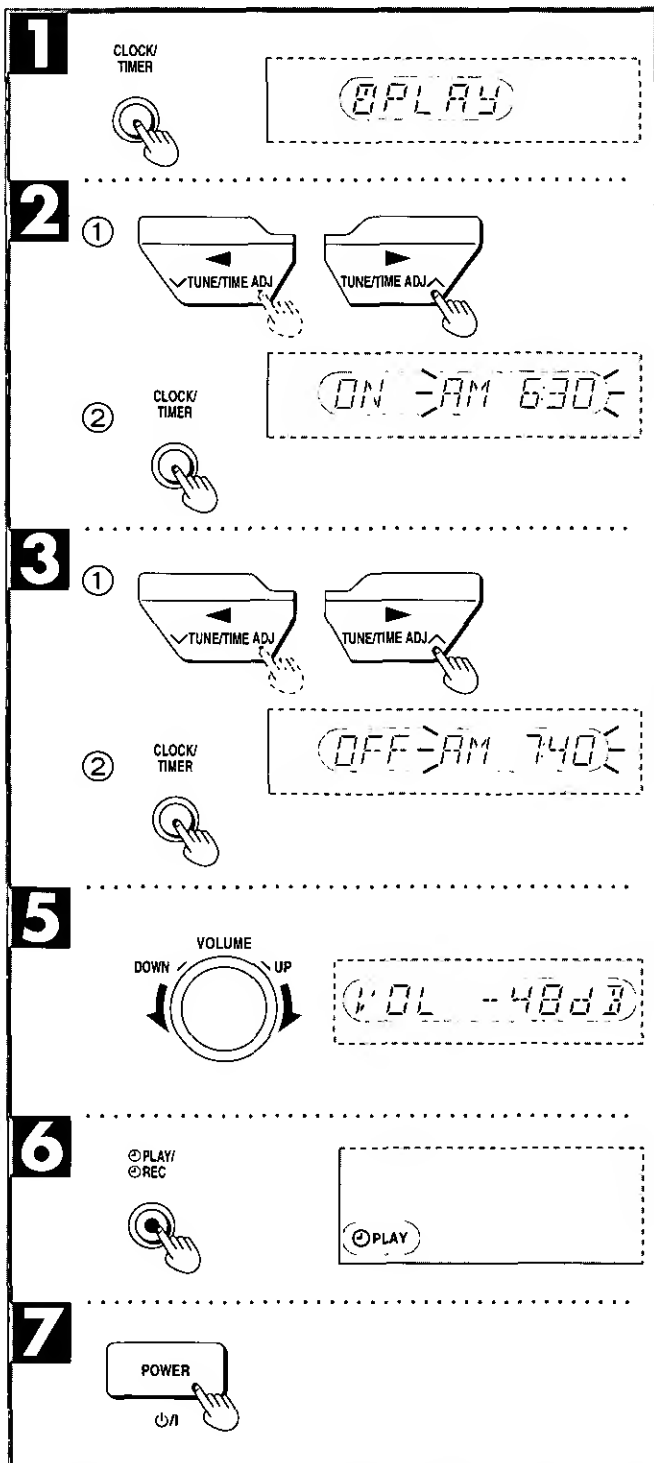
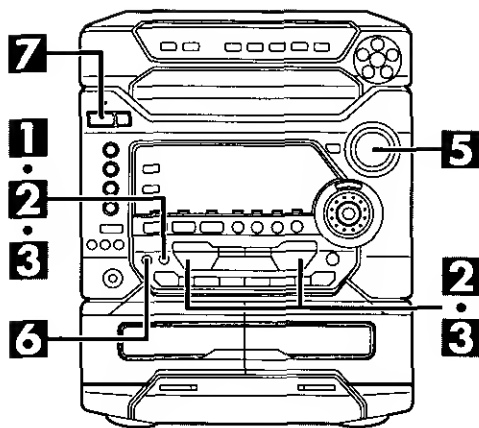
Press [TAPE EDIT] and start Karaoke performance.

Note

- To playback the recorded tape, set the Karaoke mode to "off".
- You cannot record in Karaoke mode using sound quality and surround effects.

To record your voice

1. Press [TAPE DECK1/2].
2. Press [● REC/STOP] to start recording.
3. Speak through the microphone and adjust volume with [VOLUME] and [MIC VOL].



Using the timer

Using the play timer

Preparations

- Switch on the power.
- Make sure that you have completed "Setting the time" on page 13.

The figure shows how to set the play timer to play from 6:30 a.m. to 7:40 a.m.

1 Press [CLOCK/TIMER] to select "⊕ PLAY".

Every time you press the button;
CLOCK → ⊕ PLAY → ⊕ REC
← Previous display →

2 "ON" time setting

(Within 8 seconds or so)

- 1 Press [TUNE/TIME ADJ (v or ^)] to select the starting time.
- 2 Press [CLOCK/TIMER].

3 "OFF" time setting

- 1 Press [TUNE/TIME ADJ (v or ^)] to select the ending time.
- 2 Press [CLOCK/TIMER].

4 Source selection

Select the desired source and then prepare for playing.

To play disc(s)

Press [DVD/CD] and insert an audio CD, etc.

If more than 1 disc is loaded

Press [DISC1]–[DISC5] to select the disc you want to hear first, and press [■].

Note

Disc selection does not become part of the timer memory.

To play tape(s)

Press [TAPE DECK1/2] and insert tape(s).

If tapes are loaded in both decks, playback will start from deck 2.

To play the radio

Press [TUNER/BAND] and tune in the desired station.

To play the external unit

Press [AUX1/2].

5 Play volume setting

Turn [VOLUME] to adjust the playback volume.

6 Press [⊕ PLAY/⊕ REC] to select "⊕ PLAY".

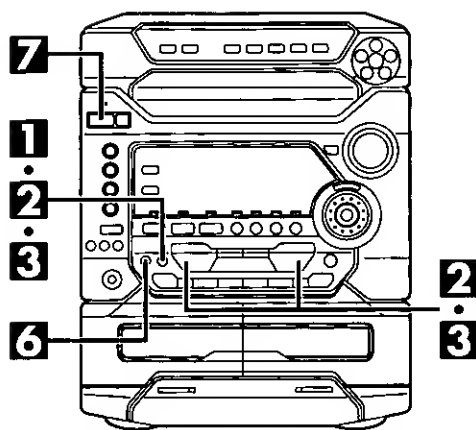
Every time you press the button;
⊕ PLAY → ⊕ REC
← off →

7 Press [POWER] to switch off the power.

The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.

To switch the timer OFF

Press [⊕ PLAY/⊕ REC] and check "⊕ PLAY" goes out.



Using the timer

Using the record timer

Preparations

- Switch on the power.
- Make sure that you have completed "Setting the time" on page 13.

Set the timer at least 2 minutes before you want to start recording.

The figure shows how to set the record timer for recording from 6:30 p.m. to 8:00 p.m.

1 Press [CLOCK/TIMER] to select "⊙ REC".

Every time you press the button;
CLOCK → ⊙ PLAY → ⊙ REC
↑ Previous display ↓

2 "ON" time setting

(Within 8 seconds or so)

- 1 Press [TUNE/TIME ADJ (v or ^)] to select the starting time.
- 2 Press [CLOCK/TIMER].

3 "OFF" time setting

- 1 Press [TUNE/TIME ADJ (v or ^)] to select the ending time.
- 2 Press [CLOCK/TIMER].

4 Source selection

Select the desired source and then prepare for recording.

To record from the radio

Press [TUNER/BAND] and tune in the desired station.

To record the external unit

Press [AUX1/2].

5 Prepare for recording.

1. Insert a tape into deck 2 with the side on which the recording will start facing you.
2. Select the reverse mode.
3. (Only for Asia and China) Select the Dolby NR mode.

Note

Reverse mode does not become part of the timer memory.

6 Press [⊙ PLAY/⊙ REC] to select "⊙ REC".

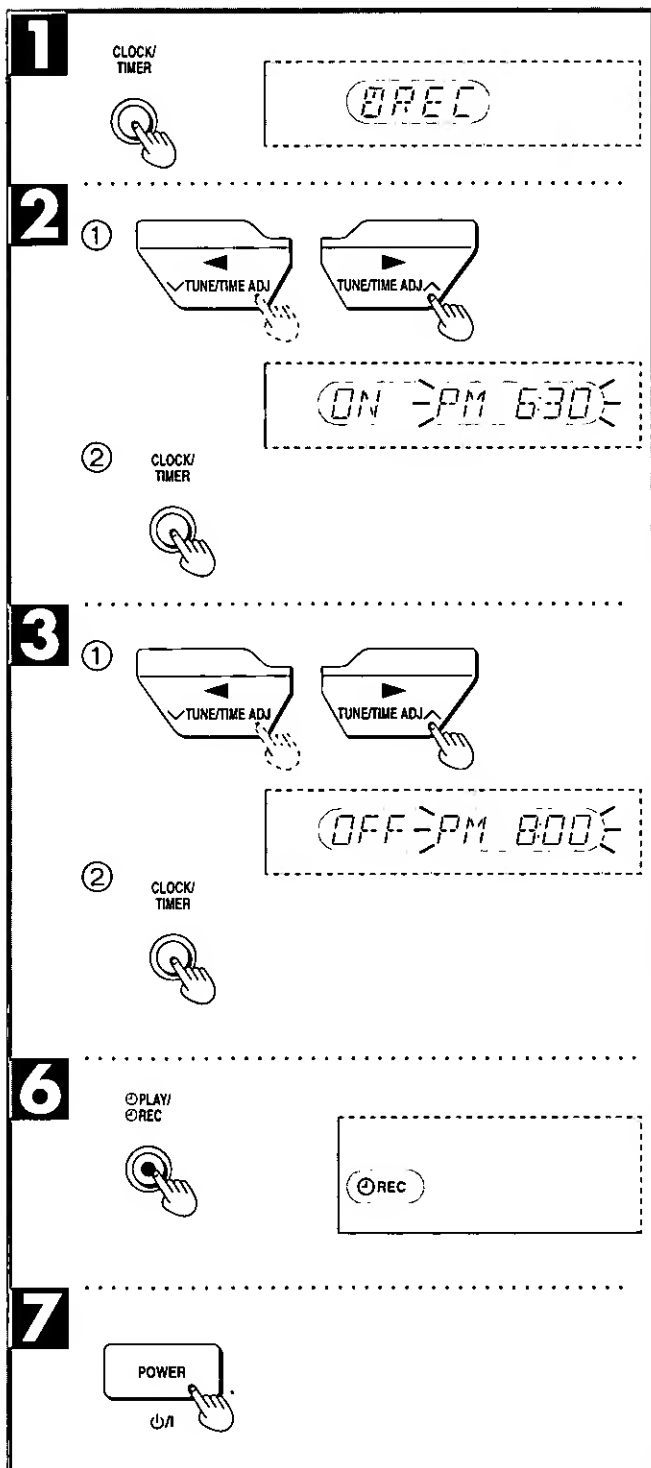
Every time you press the button;
⊙ PLAY → ⊙ REC
↑ off ↓

7 Press [POWER] to switch off the power.

About 30 seconds before the set time, the stereo mutes all sound automatically.

To switch the timer OFF

Press [⊙ PLAY/⊙ REC] and check "⊙ REC" goes out.



Using the play/record timer

If you set the timer incorrectly

Repeat the procedure from step 1.

To check settings

While the unit is on and the "⊙ PLAY" (or ⊙ REC) indicator is on, press [CLOCK/TIMER] so "⊙ PLAY" (or ⊙ REC) appears on the display.

Two seconds after "⊙ PLAY" (or ⊙ REC) appears, the settings are displayed in the following order.

•For play timer

- ① Play start time
- ② Play end time
- ③ Play source
- ④ Playback volume

•For record timer

- ① Recording start time
- ② Recording end time
- ③ Recording source

To enjoy the desired source after the timer setting is completed

The volume level and music source are stored in the timer memory and the timer will start in these preset conditions. However the Disc number and reverse mode do not get stored in the timer memory.

1. After step 7, turn on the unit and start playing the desired source.
2. Reset the Disc number and reverse mode if you have changed any of them, confirm that a Disc or cassette is inserted, then press [POWER] to put the unit on standby.

Turning the timer ON/OFF

One of the timers is on when the [⊙ PLAY/⊙ REC] button is alight.

When the unit is on (or off and NORMAL mode) you can confirm which is on by checking the indicators on the display.

When the unit is off and in ECO mode, press [CLOCK/TIMER].

The display will then show which timer is on and the settings that have been made (see above).

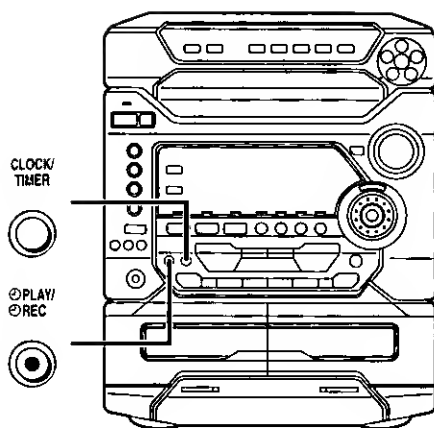
To change the timer, press [⊙ PLAY/⊙ REC].

Each time the button is pressed the setting changes as follows.

⊙ PLAY → ⊙ REC → off

Note

- If the power is on, the timer will not function. The system must be in the standby mode.
- If you switch the power to the standby mode while the play/record timer is functioning, the OFF time setting will not be activated.
- If "AUX1/2" is selected as the source, when the timer comes ON, the system will turn ON and will engage "AUX1/2" as the source. If you want to playback or record from a connected component, set the component's timer to the same time. (See the instruction manual that came with the component.)
- The play timer cannot be used in combination with the record timer.



Using the timer

Using the sleep timer

This timer turns power to your system OFF at the set time (Max. 2 hours, settable at 30 minute intervals). It lets you fall asleep listening to music.

by remote control only

The figure shows how to set the system to standby mode after 30 minutes.

While enjoying the desired source:

Press [SLEEP] ([SHIFT]+[SUB TITLE]) to select the desired time.

Every time you press the button;

→30→60→90→120→OFF

The system is turned off after the set time has elapsed.

To cancel the sleep timer:

Press [SLEEP] ([SHIFT]+[SUB TITLE]) to select "OFF".

To confirm the remaining time:

(only while power is ON)

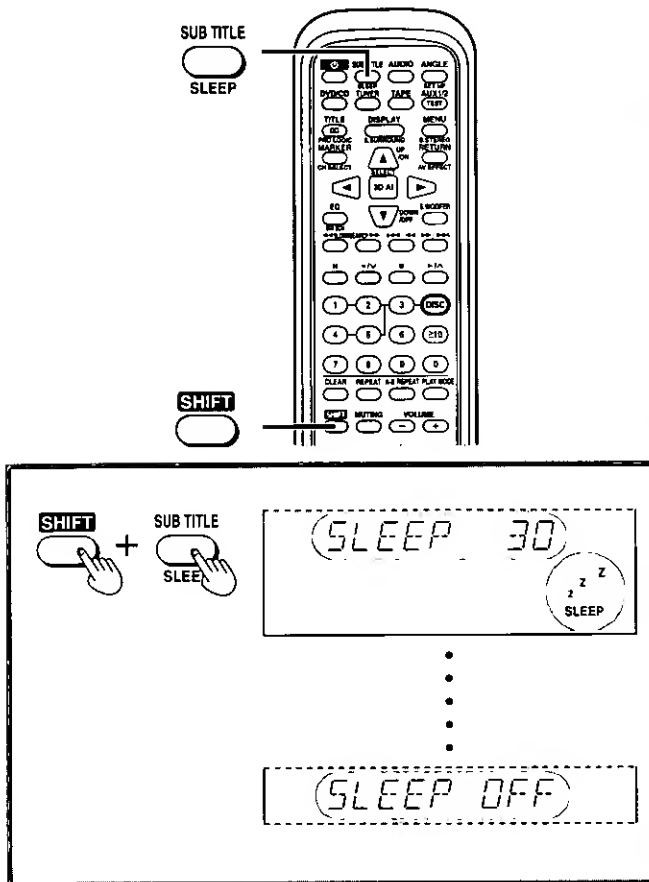
Press [SLEEP] ([SHIFT]+[SUB TITLE]).

To change the time remaining during operation:

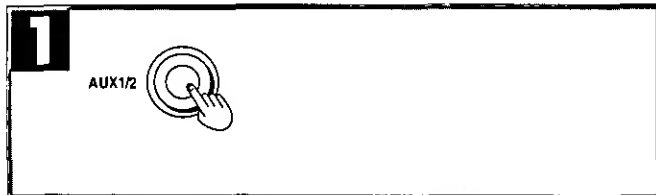
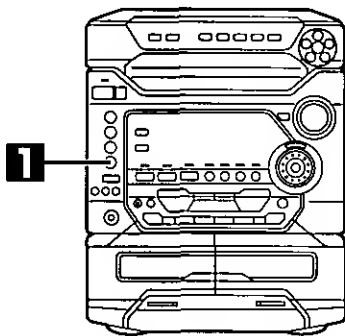
Press [SLEEP] ([SHIFT]+[SUB TITLE]) to show the remaining time then press [SLEEP] ([SHIFT]+[SUB TITLE]) to select the desired time.

Note

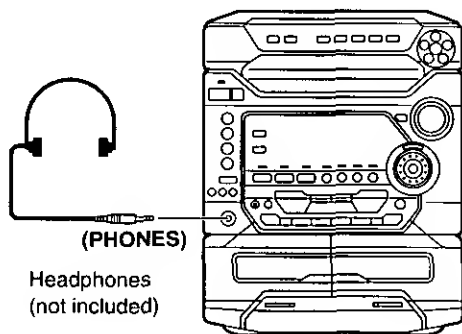
- The sleep timer turns OFF automatically the moment you attempt to edit-record a CD.
- The sleep timer can be used in combination with the play/record timer.
The sleep timer always has priority.
Be sure not to overlap timer settings.



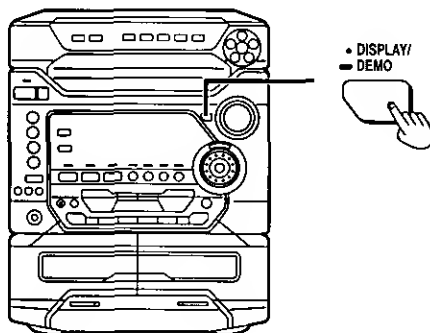
A



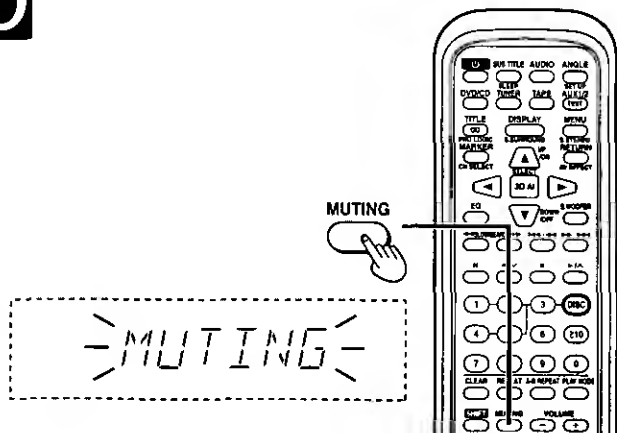
B



C



D



Using an external unit

Listening to an external source **A**

(→ page 10 for external unit connection.)

- 1 Press [AUX1/2].
The power will come on automatically.
- 2 Start playback from the external source.
(For details, refer to the owner's manual of the equipment.)

Recording from an external source

1. Press [▲ DECK 2 OPEN] and insert the tape.
Close the holder by hand.
2. (Only for Asia and China) Press [DOLBY NR].
You have to turn Dolby NR ON/OFF according to the type of recording you want to make.
3. Press [REV MODE] to select the reverse mode.
4. Press [AUX1/2] to select the external source.
5. Press [● REC/STOP].
Recording starts.
6. Start playback from the external source.
(For details, refer to the owner's manual of the equipment.)

Listening with headphones **B**

Reduce the volume level, and connect the headphones.

Plug type: 3.5 mm stereo

During connection, Dolby Digital (5.1ch) sources are automatically down mixed to 2 channel stereo and the system prohibit the operation of Dolby surround system.

This unit resumes the previous condition when the headphones are disconnected.

Note

Avoid listening for prolonged periods of time to prevent hearing damage.

Convenient functions

Switching displays **C**

Press [-DISPLAY/-DEMO] to select the desired spectrum analyzer.

Every time you press the button;

Normal → Peak hold → Aurora

↑ off ←

To mute the volume **D**

by remote control only

This feature is convenient when you have a telephone call, etc.

Press [MUTING].

Press the button again to cancel.

"MUTING" goes out.

Muting can also be cancelled by lowering the volume all the way (→ dB).

When the system is turned off, the muting operation will be automatically cancelled.

Initial settings for DVD/Video CD/CD changer section

Once the initial settings have been completed, the system can always be operated under the same conditions (especially with DVD discs).

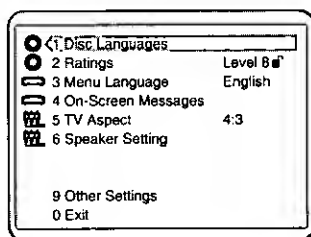
The setting screens are slightly different for each area.

Common initial settings

by remote control only

- 1 Press [SET UP] ([SHIFT]+[ANGLE]) in the stop mode.

The initial settings screen is displayed.



This screen doesn't have item number "7" and "8".

- 2 ① Press [▼] or [▲] to select the desired item.
② Press [SELECT].

- 1 Disc Languages (= page 55)
- 2 Ratings (= page 56)
- 3 Menu Language (= page 56)
- 4 On-Screen Messages (= page 57)
- 5 TV Aspect (= page 57)
- 6 Speaker Setting (= page 58)
- 9 Other Settings (= page 58)

- 3 ① Press [▼] or [▲] to select the desired value.
② Press [SELECT].

Some items require additional steps.

Setting is finished and the initial settings screen is displayed.

To clear the initial setting screen

Press [▼] or [▲] to select "0 Exit" and press [SELECT]. Pressing [SET UP] ([SHIFT]+[ANGLE]) or [RETURN] also clears screen.

For your reference

The numeric buttons can also be used for selecting items or values instead of the cursor buttons; in this case, pressing [SELECT] is not necessary.

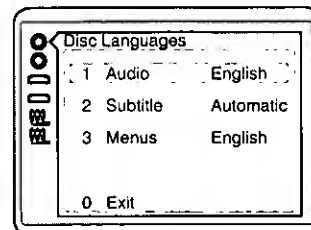
Selecting disc languages

DVD

This is to select the audio soundtrack language, subtitle language and the language used in title menus or DVD menus which will always be used for every disc to be played back.

by remote control only

- 1 At the initial settings screen (= page 55)
 - ① Press [▼] or [▲] to select "1 Disc Languages".
 - ② Press [SELECT].



- 2 ① Press [▼] or [▲] to select the desired item.
② Press [SELECT].

• "1 Audio"

English: English. (Factory setting)
French/Spanish: Each language.
Original: The original language of each disc.
Other ****: Another language can be selected.
(= page 62)

• "2 Subtitle"

Automatic: The same language selected for "Audio".
(Factory setting)
• If the language selected for "Audio" is used during playback, the subtitles will not appear.
• If another language is used during playback, the subtitles will appear in the language selected at the setup "Audio".

English/French/Spanish:

Each language.

Other ****: Another language can be selected.

• "3 Menus"

English: English. (Factory setting)
French/Spanish: Each language.
Other ****: Another language can be selected.

- 3 ① Press [▼] or [▲] to select the desired language.

Input a code number by numeric buttons when you selected "Other ****".

- ② Press [SELECT].

The screen in step 1 is displayed. Select "0 Exit" by cursor buttons and press [SELECT] to return to the initial settings screen.

Note

If the language selected is not available on the disc, the language designated by each disc will be selected.

Selecting rating level

DVD

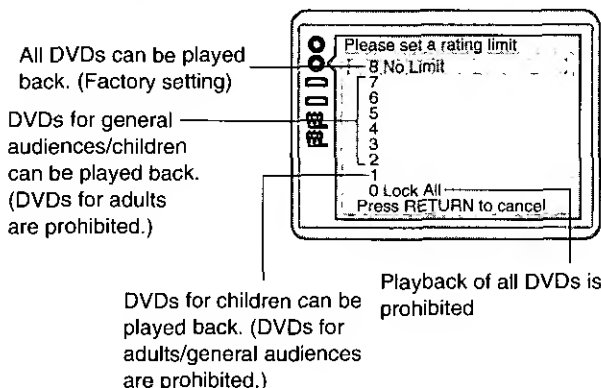
This is to disable the playing of specified DVDs which are unsuitable for children.

- Some DVDs are encoded with specific rating level. If the rating level of the disc is higher than that preset in the setup operation, playback of the disc will be prohibited.

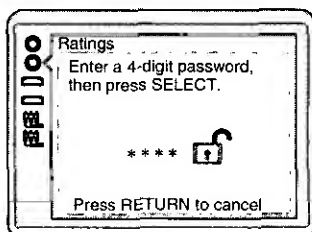
by remote control only

1 At the initial settings screen (→ page 55)

- Press [▼] or [▲] to select "2 Ratings".
- Press [SELECT].



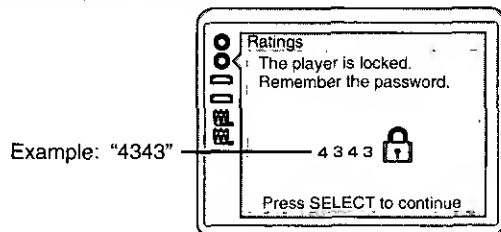
2 ① Press [▼] or [▲] to select the desired level. ② Press [SELECT].



3 When level 7 or lower is selected

- Input a 4-digit password by numeric buttons.
- Press [SELECT].

The lock symbol appears closed to show the rating is locked.



4 Press [SELECT].

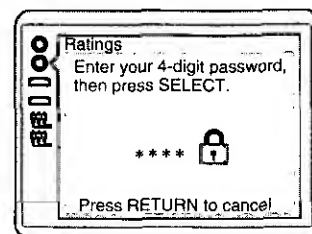
Setting is finished and the initial settings screen is displayed.

The rating is locked. Any discs whose rating is higher than the setting cannot be played back unless the correct password is entered.

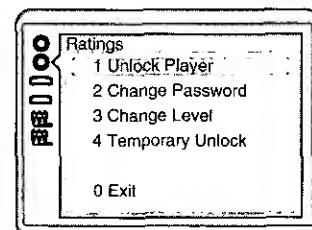
To change the settings

(Be sure to remove a DVD disc before changing a setting.)

- Select "2" with the cursor buttons at the initial settings screen and press [SELECT].



- Input 4-digit password and press [SELECT].



- Select the preferred item with the cursor buttons and press [SELECT].

- 1 Unlock Player**
Press [SELECT].
- 2 Change Password**
Enter a new 4-digit password and press [SELECT]. Press [SELECT] again.
- 3 Change Level**
Select a level and press [SELECT].
- 4 Temporary Unlock**
Select to temporarily unlock the player to view the DVD in the play position immediately after changing the ratings. Select before exiting the menu. Press [SELECT].
- Select "0 Exit" and press [SELECT] to exit.

Note

Some discs may not be encoded with specific rating level information though its disc jacket says that it is for "adults".

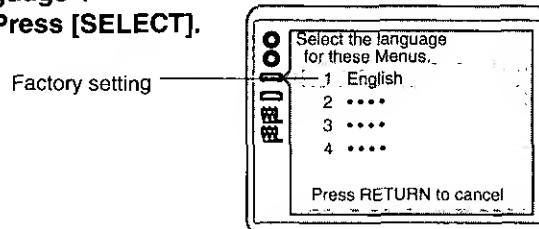
Selecting menu language

by remote control only

The language of the On-Screen message is changed.

1 At the initial settings screen (→ page 55)

- Press [▼] or [▲] to select "3 Menu Language".
- Press [SELECT].



2 ① Press [▼] or [▲] to select the desired language. ② Press [SELECT].

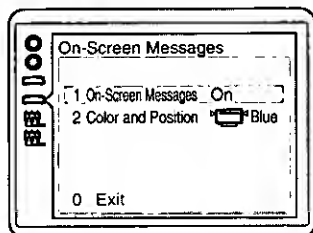
Setting is finished and the initial settings screen is displayed.

Setting the On-Screen Messages

You can select whether On-Screen Display messages such as "Play" and "Still" will be displayed or not.

by remote control only

- 1** At the initial settings screen (⇒ page 55)
 - ① Press [▼] or [▲] to select "4 On-Screen Messages".
 - ② Press [SELECT].



- 2** ① Press [▼] or [▲] to select the desired item.
② Press [SELECT].

- 1 On-Screen Messages**
To select whether "Play", "Still" and others are displayed or not.
- 2 Color and Position**
To select the color and position of "Play", "Still" and other as well as GUI screens.

- 3** ① Press [▼] or [▲] to select desired setting.
② Press [SELECT].

- "1 On-Screen Messages"
 - 1 On: "Play", "Still" and others will always appear on the TV. (Factory setting)
 - 2 Off: "Play", "Still" and others will not appear on the TV.
- "2 Color and Position"

The colors and positions are set as follows:

 - 1 Blue/Upper (Factory setting)
 - 2 Violet/Upper
 - 3 Green/Upper
 - 4 Blue/Middle upper
 - 5 Violet/Middle upper
 - 6 Green/Middle upper

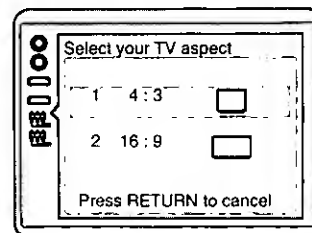
The screen illustrated in step **1** is displayed. Select "0" by using cursor buttons and press [SELECT] to return to the initial settings screen.

Selecting TV aspect

Select the appropriate TV aspect according to your TV set; conventional size screen (4:3) or wide-screen (16:9).

by remote control only

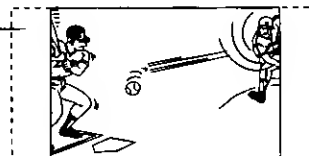
- 1** At the initial settings screen (⇒ page 55)
 - ① Press [▼] or [▲] to select "5 TV Aspect".
 - ② Press [SELECT].



- 2** ① Press [▼] or [▲] to select the desired type.
② Press [SELECT].

- 4:3 ☐ A conventional TV. (factory setting)

Video material formatted in the Pan & Scan style is played back in that style (the left and right edges are cut off).

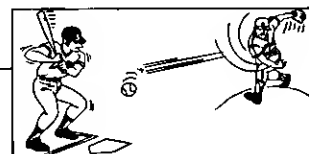


Video material not formatted in the Pan & Scan style is played back in the letterbox style (black bands appear at top and bottom of screen).



- 16:9 ☐ A wide-screen TV.

Played in "FULL" size. (Set the wide-screen TV to "FULL" mode.)



※ Each screen shows an example when the video material for a wide-screen is played. (This setting does not affect the video material for conventional size.)

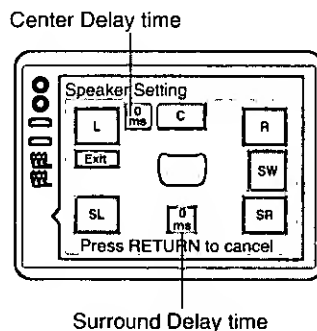
Setting is finished and the initial settings screen is displayed.



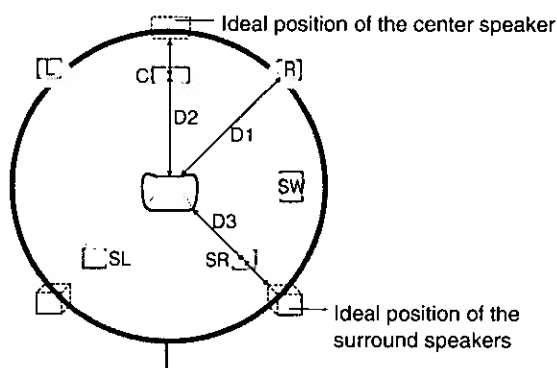
Speaker setting

by remote control only

- 1 At the initial settings screen (⇒ page 55)
 - ① Press [▼] or [▲] to select "6 Speaker Setting".
 - ② Press [SELECT].



- 2 ① Press [▼] or [▲] to select "Center Delay time" or "Surround Delay time".
 - ② Press [SELECT].
- 3 ① Press [▼] or [▲] to select the desired time.
 - ② Press [SELECT].



It is recommended to locate all the speakers inside of this circle.

If the surround speakers or the center speaker can't be installed at an equal distance to the front speakers from the listening position, change the delay time to get better surround effect.

• When D2 or D3 is equal to or larger than D1, no setting is necessary. Otherwise, change the setting according to the table below.

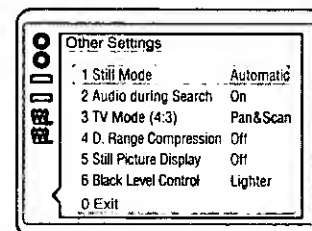
Speaker	Delay time	Difference between D1 and D2/D3
Center speaker (D2)	1.3 ms	approx. 50 cm
	2.6 ms	approx. 100 cm
	3.9 ms	approx. 150 cm
	5.3 ms	approx. 200 cm
Surround speakers (D3)	5.3 ms	approx. 200 cm
	10.6 ms	approx. 400 cm
	15.9 ms	approx. 600 cm

To return to the initial setting screen, press [◀] to select "Exit" and press [SELECT].

Other settings

by remote control only

- 1 At the initial settings screen (⇒ page 55)
 - ① Press [▼] or [▲] to select "9 Other Settings".
 - ② Press [SELECT].



- 2 ① Press [▼] or [▲] to select the desired item.
 - ② Press [SELECT].

• "1 Still Mode"

Automatic: "Frame still" and "Field still" are automatically selected during the still mode. (Factory setting)

Field: When jittering occurs in the pictures.

Frame: When small text or fine patterns cannot be seen clearly.

• "2 Audio during Search"

On: Required audio. (Factory setting)

Off: Not required audio during search. (While using CDs, it does not work.)

• "3 TV Mode (4:3)"

Pan & Scan: The video material for a wide-screen will be played back in the Pan & Scan style on a conventional size TV. (Factory setting)

• Video material not formatted in the Pan & Scan style will be played back in the letterbox style.

Letterbox: The video material for a wide-screen in the letterbox style on a conventional size TV.

• "4 D. (Dynamic) Range Compression"

Off: Normal audio range. (Factory setting)

On: Dynamic sound even on a low volume. [This function only works with Dolby Digital DVDs.]

• "5 Still Picture Display"

Off: The picture type (I/P/B) will not be displayed in the still picture mode. (Factory setting)

On: The picture type (I/P/B) will be displayed.

• Only for U.S.A. and Canada

• "6 Black Level Control"

Lighter: The black level of the picture is selected to the lighter one. (Factory setting)

Darker: The black level of the picture is selected to the darker one.

- 3 ① Press [▼] or [▲] to select the desired setting at each screen.
 - ② Press [SELECT].

The screen in step 1 is displayed. Select "0 Exit" with the cursor buttons and press [SELECT] to return to the initial settings screen.

Concerning discs

With this system, you can only play discs having these marks. However, do not use irregular shaped discs. Discs of the sort can damage the unit. **A**



Handling precautions B-D

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lintfree cloth before using the disc.
- Do not write on the label side with a ball-point or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to discs. (Do not use discs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.

Storage precautions

Be sure to store discs in their cases to protect them from dust, scratches, and warping.

Do not place or store discs in the following places

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

Concerning cassette tapes

Selection of cassette tapes

Tapes can get caught on the capstans. Use caution with the following types of tapes.

Cassette tapes exceeding 100 minutes

Tapes are made of a thin film material. Do not repeatedly advance and stop the tape, fast-forward it or rewind it.

Endless-tapes

For this unit, it is recommended to use the tape which is appropriate to the auto reverse mechanism.

Always read the instructions provided with your tapes.

Tape slack B

Tape slack may cause the tape to break.

Erasure prevention E

Use a screwdriver or similar object to break out the tab.

To re-record on a protected cassette

Cover the hole with adhesive tape

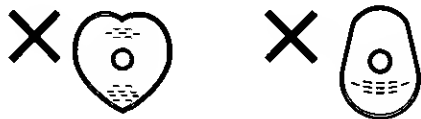
Do not cover the detection hole on high-position tapes

Storage precautions

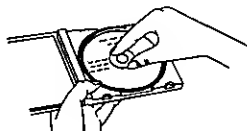
Do not place or store tapes in the following places;

- In high temperature (35°C or higher) or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Locations exposed to direct sunlight.

A

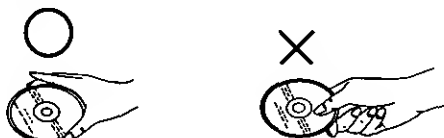


B



C

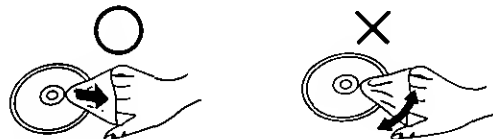
How to hold discs



Do not touch the recorded surface.

D

How to clean discs



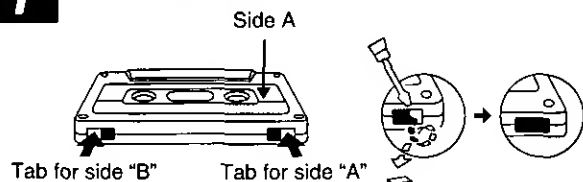
Wipe from inside outward.

E

How to take up tape slack



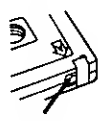
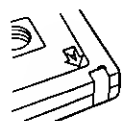
F



To re-record

Normal position tape

High-position tape



Detection hole

Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

For detailed instructions, contact an authorized servicenter in the U.S.A. and Panasonic Canada Inc. Customer Care Centre in Canada.

In the U.S.A. 1-800-211-7262 or web site (<http://www.panasonic.com>)

In Canada 905-624-5505 or web site (www.panasonic.ca)

When the picture of the DVD does not appear on the TV, confirm the region number on the DVD disc.

The region number for this system is 1, 3 or 6. (→ see page 6)



Problem	Probable cause(s)	Suggested remedy	Reference page(s)
Common problems			
ECO mode is on but the display panel still lights up.	DEMO mode is on.	Turn DEMO mode off.	12
The location of the various musical instruments is not well defined.	The (+) and (−) connections to one of the speakers are reversed.	Connect the speaker cords correctly.	8, 9
The left and right sounds are reversed.	The left and right connections to the speaker are reversed.	Connect the speaker cords correctly.	8, 9
LOW frequency sounds cannot be heard.	Either the left or the right LOW speaker cable is not connected.	Connect the left and right speaker cables to the LOW terminals.	8, 9
There is no sound when a source is being played.	The (+) and (−) wire of the speaker cords are shorted.	Switch the system to the standby mode, and reconnect the speaker cords so that they are not shorted. Then switch on the power.	8, 9
"ERROR" message appears on the display.	Incorrect operation has been done.	Operate the unit correctly by following the operating instructions.	13
"—:—" appears on the display.	You plugged the power cord in for the first time.	Set the time.	
	There was a power failure recently.		
"F61" appears on the display.	Check if the speaker cords have shorted.	If they are not shorted then there is a power supply problem. Consult your dealer for assistance.	6
"DTS NO AUDIO" appears on the display.	The disc is encoded with DTS.	This system cannot play DTS discs. Replace the disc.	
"DVD U11" appears on the display.	Disc is dirty.	Wipe the disc clean.	59
"DVD H <input type="checkbox"/> <input type="checkbox"/> " appears on the display.	Trouble is likely to have occurred. The number following "H" depends on the status of the DVD/Video CD/CD section.	Turn the system off and then back to on. Alternatively, turn off the system, disconnect the AC power cord, and then re-connect it. If the display isn't cleared, consult your dealer about getting the unit repaired. Tell the dealer the number that was on the display.	

While listening to FM broadcasts			
There is a "rushing noise" during a stereo broadcast which is not audible during a monaural broadcast.	The transmitting station is distant.	If you are using an indoor antenna, change to an outdoor antenna.	9
You hear excessive noise during a stereo broadcast, and occasionally the sound disappears.	The installation location and orientation of the antenna are unsuitable.		
The stereo indicator ("STEREO") flickers and does not light completely.	The transmitting station is distant.		
	The power of the TV set or VCR is ON.	Try switching off the TV set or VCR.	9
The sound during a stereo broadcast is highly distorted.	There is a building or mountain nearby.	Use a high-grade outdoor antenna, and install it in a good location, height, and orientation for reception.	

Problem	Probable cause(s)	Suggested remedy	Reference page(s)
While listening to AM broadcasts			
You hear an unusual beat sound.	You are using the system at the same time you are playing a TV set.	Switch off the TV set, or use the system further away from it.	
You hear a low-frequency hum.	The antenna wire is near the power cord.	Separate the antenna wire from the power cord.	
When there is a television set nearby			
The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect.	If you are using an indoor antenna, change to an outdoor antenna.	9
	The wiring at the back of the system is unsuitable.	Separate the antenna wire of the TV set from the system.	
When listening to tapes			
Sound is low, intermittent, poor quality, noisy, scratchy, or unsteady.	Heads are dirty.	Clean the heads.	64
The deck does not enter the recording mode.	The erase-prevention tabs have been removed from the cassette.	Attach tape to cover the space left by removal of the erase-prevention tabs.	59
While enjoying discs			
Disc play starts automatically before you complete the process.	The Automatic Play function is activated.	To stop playing, press [■].	16
Disc play does not start from the first track.	The Resume function is activated.	Press [■] while the player is stopped to cancel the Resume function.	17
The picture of the DVD/ video CD does not appear on the TV.	The video connection cable is not connected.	Connect the video connection cable.	8, 9
	The TV is not set to video input mode.	Set the TV to video input mode.	
The display does not show the correct indication. Disc play does not start when you press the play button.	The disc is upside down.	Set the disc with the label facing upward.	16
	The disc is dirty.	Wipe the disc with a soft cloth.	59
	The disc is a nonstandard one.	Replace the disc with a different one.	59
	There is condensation inside the disc changer.	Wait for 60 minutes before using the discs.	
"TAKE OUT/DISC" appears on the display.	There is a problem with the Disc mechanism. (A power failure may have occurred.)	The tray will open automatically. Remove the disc from the tray, and after ensuring there is no disc in the tray close it. The unit will make the disc changing noises for a few moments and then it should operate normally.	
You have forgotten your age restriction password.	Be sure to remove a disc before operation below. While the system is in the stop mode, press and hold [■] button and [≥10] button on the remote control for longer than a few seconds (until "Initialized" disappears from the TV monitor). Press [POWER] to turn the system off then on again. The lock will be released and all initial settings will return to the default values.		
While using the remote control			
The system cannot be operated with the remote control.	The batteries are installed in the reverse polarity.	Re-insert the batteries observing the correct polarity.	5
	The batteries are run-down.	Replace the batteries with new batteries.	5

Language codes

Enter the appropriate code number for the initial settings "Audio", "Subtitle" and/or "Menus".

Language Name	Code	Language Name	Code	Language Name	Code	Language Name	Code
Abkhazian	6566	Fiji	7074	Lingala	7678	Singhalese	8373
Afar	6565	Finnish	7073	Lithuanian	7684	Slovak	8375
Afrikaans	6570	French	7082	Macedonian	7775	Slovenian	8376
Albanian	8381	Frisian	7089	Malagasy	7771	Somali	8379
Ameharic	6577	Galician	7176	Malay	7783	Spanish	6983
Arabic	6582	Georgian	7565	Malayalam	7776	Sundanese	8385
Armenian	7289	German	6869	Maltese	7784	Swahili	8387
Assamese	6583	Greek	6976	Maori	7773	Swedish	8386
Aymara	6588	Greenlandic	7576	Marathi	7782	Tagalog	8476
Azerbaijani	6590	Guarani	7178	Moldavian	7779	Tajik	8471
Bashkir	6665	Gujarati	7185	Mongolian	7778	Tamil	8465
Basque	6985	Hausa	7265	Nauru	7865	Tatar	8484
Bengali; Bangla	6678	Hebrew	7387	Nepali	7869	Telugu	8469
Bhutani	6890	Hindi	7273	Norwegian	7879	Thai	8472
Bihari	6672	Hungarian	7285	Oriya	7982	Tibetan	6679
Breton	6682	Icelandic	7383	Panjabi	8065	Tigrinya	8473
Bulgarian	6671	Indonesian	7378	Pashto, Pushto	8083	Tonga	8479
Burmese	7789	Interlingua	7365	Persian	7065	Turkish	8482
Byelorussian	6669	Irish	7165	Polish	8076	Turkmen	8475
Cambodian	7577	Italian	7384	Portuguese	8084	Twi	8487
Catalan	6765	Japanese	7465	Quechua	8185	Ukrainian	8575
Chinese	9072	Javanese	7487	Rhaeto-Romance	8277	Urdu	8582
Corsican	6779	Kannada	7578	Romanian	8279	Uzbek	8590
Croatian	7282	Kashmiri	7583	Russian	8285	Vietnamese	8673
Czech	6783	Kazakh	7575	Samoan	8377	Volapük	8679
Danish	3865	Kirghiz	7589	Sanskrit	8365	Welsh	6789
Dutch	7876	Korean	7579	Scots Gaelic	7168	Wolof	8779
English	6978	Kurdish	7585	Serbian	8382	Xhosa	8872
Esperanto	6979	Laothian	7679	Serbo-Croatian	8372	Yiddish	7473
Estonian	6984	Latin	7665	Shona	8378	Yoruba	8979
Faroese	7079	Latvian, Lettish	7686	Sindhi	8368	Zulu	9085

AMPLIFIER SECTION

Front speaker power output

For U.S.A. and Canada

RMS power output

THD 1.0% (at 1 kHz), both channels driven
95 W per channel (6Ω)

THD 1.0% (at 60 Hz–13 kHz), both channels driven
85 W per channel (6Ω)

For Asia and China

PMPO power output

2200 W

RMS power output

THD 10% (at 1 kHz) both channels driven
110 W per channel (6Ω)

Power output in

Dolby Pro Logic mode

For U.S.A. and Canada

RMS power output

THD 1.0% (at 1 kHz) both channels driven
Total 330 W
Front 95 W per channel (6Ω)
Center 70 W (8Ω)
Surround 35 W per channel (8Ω)

For Asia and China

PMPO power output

Total 3300 W

RMS power output

THD 10% (at 1 kHz) both channels driven
Total 400 W
Front 110 W per channel (6Ω)
Center 90 W (8Ω)
Surround 45 W per channel (8Ω)

Input sensitivity

AUX

250 mV

Only for Asia and China

MIC

0.7 mV

Input Impedance

AUX

10 kΩ

Only for Asia and China

MIC

600Ω

FM TUNER SECTION

Frequency range

For U.S.A. and Canada

87.9–107.9 MHz (200 kHz step)
87.5–108.0 MHz (100 kHz step)

For Asia and China

87.5–108.0 MHz (50 kHz step)

Sensitivity

For U.S.A. and Canada

16.3 dBf (1.8 μV, IHF)

For Asia and China

1.8 μV, IHF

Antenna terminal(s)

75Ω (unbalanced)

AM TUNER SECTION

Frequency range

For U.S.A. and Canada

520–1710 kHz (10 kHz step)

For Asia and China

522–1629 kHz (9 kHz step)
520–1630 kHz (10 kHz step)

Sensitivity

For U.S.A. and Canada

S/N 20 dB at 1000 kHz
500 μV

For Asia and China

S/N 20 dB at 999 kHz
500 μV

CASSETTE DECK SECTION

Track system

4 track, 2 channel

Heads

Record/playback

Solid permalloy head

Erasure

Double gap ferrite head

Motor

DC servo motor

Recording system

AC bias 100 kHz

Erasing system

AC erase 100 kHz

Tape speed

4.8 cm/s (1½ ips)

Overall frequency response

(+3, –6 dB at DECK OUT)

NORMAL (TYPE I)

35 Hz–14 kHz

HIGH (TYPE II)

35 Hz–14 kHz

S/N

For U.S.A. and Canada

50 dB (A_WTD)

For Asia and China

Dolby NR off

50 dB (A_WTD)

Dolby NR on

60 dB (CCIR)

Wow and flutter

0.18% (WRMS)

Fast forward and rewind times

Approx. 120 seconds with C-60 cassette tape

DISC SECTION

Disc

DVD VIDEO

8 cm/12 cm single-sided, single-layer

8 cm/12 cm single-sided, double-layer

8 cm/12 cm double-sided, double-layer

(One layer per side)

8 cm/12 cm

CD/V-CD

Video

For U.S.A. and Canada

Signal system

NTSC

For Asia and China

Signal system

NTSC/PAL

(depend on disc format)

Output level Composite video 1 Vp-p (75Ω)

For U.S.A. and Canada

S-video Y

1 Vp-p (75Ω)

S-video C

0.286 Vp-p (75Ω/NTSC)

For Asia and China

S-video Y

1 Vp-p (75Ω)

S-video C

0.300 Vp-p (75Ω/PAL)

0.286 Vp-p (75Ω/NTSC)

Audio

Sampling frequency

CD

44.1 kHz

DVD

48 kHz/96 kHz

Decoding

16/20/24 bit linear

Wow and flutter

Below measurable limit

Digital filter

8 fs

D/A converter

Delta-sigma DAC

Pick up

Beam Source

Semiconductor Laser

Wavelength

665 nm

SPEAKER SECTION

Front speakers (SB-AK57/SB-DK1)

Type

4 way speaker system

Speaker(s)

Super woofer

17 cm cone type

Woofer

12 cm cone type

Midrange

6 cm ring shaped dome type

Tweeter

Piezo type

Impedance

Total 6Ω

Input power

Total 160 W (Music)

Output sound pressure level

84 dB/W (1.0 m)

Cross over frequency

200 Hz, 3.5 kHz

Frequency range

45 Hz–40 kHz (–16 dB)

55 Hz–36 kHz (–10 dB)

Dimensions (W×H×D)

250×330×307 mm

(9⁷/₁₆"×13"×12³/₁₆"

Weight

5.0 kg (11.0 lb.)

Surround speakers (SB-PS70)

Type

1 way, 1 speaker

Speaker

Full range

8 cm cone type

Impedance

8Ω

Input power

60 W (Music)

Output sound pressure level

84 dB/W (1.0 m)

Frequency range

120 Hz–20 kHz (–16 dB)

Dimensions (W×H×D)

170×106×118 mm

(6⁷/₁₆"×4³/₁₆"×4⁷/₁₆"

Weight

0.9 kg (2.0 lb.)

Center speaker (SB-PC70)

Type

2 way, 2 speaker

Speaker

Woofer

10 cm cone type

Tweeter

6 cm cone type

Impedance

8Ω

Input power

120 W (Music)

Output sound pressure level

85 dB/W (1.0 m)

Cross over frequency

4 kHz

Frequency range

75 Hz–22 kHz (–16 dB)

Dimensions (W×H×D)

250×121×147 mm

(9⁷/₁₆"×4³/₁₆"×5⁷/₁₆"

Weight

1.6 kg (3.5 lb.)

GENERAL

Power supply

For U.S.A. and Canada

120 V, 60 Hz

For Asia

220/230–240 V, 50–60 Hz

For China

220 V, 50 Hz

Power consumption

For U.S.A. and Canada

240 W

For Asia and China

200 W

Standby

Normal mode

14 W

ECO mode

For U.S.A., Canada and China

0.6 W

For Asia

1 W

Dimensions (W×H×D)

270×331×338 mm

(10⁵/₁₆"×13¹/₁₆"×13¹/₁₆"

Weight

For U.S.A. and Canada

9.2 kg (20.27 lb.)

For Asia and China

9.3 kg

Note:

- Specifications are subject to change without notice.
Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

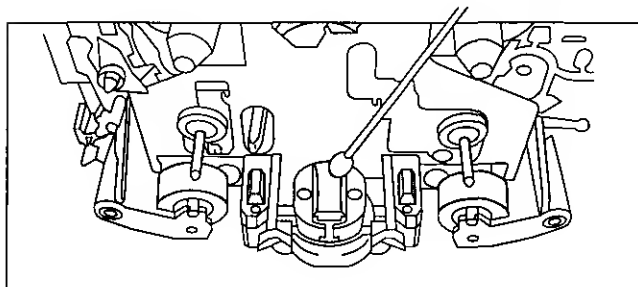
If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

For a cleaner crisper sound

We recommend that you periodically clean parts (the shaded portion in the figure below) the tape contacts like the heads.

Do not use any solution other than alcohol for head cleaning.



Product service

Do not attempt to remove the cover(s) or repair the unit yourself. Refer servicing to qualified personnel only.

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Product information

For product service, product information or assistance with product operation, refer to the servicer directory.

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

	MODEL NUMBER	SERIAL NUMBER
Main unit	_____	_____
Speakers	_____	_____

User memo:

DATE OF PURCHASE	_____
DEALER NAME	_____
DEALER ADDRESS	_____
TELEPHONE NUMBER	_____

For USA

Panasonic Consumer Electronics Company, Division of Matsushita Electric Corporation of America
One Panasonic Way Secaucus,
New Jersey 07094
<http://www.panasonic.com>

Panasonic Sales Company,
Division of Matsushita Electric of Puerto Rico, Inc. ("PSC")
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina,
Puerto Rico 00985

For Canada

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga, Ontario L4W 2T3
www.panasonic.ca

For others

Matsushita Electric Industrial Co., Ltd.
Osaka 542-8588, Japan

(En)